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THE STEREOSCOPIC PHOTOGRAPH

THE BENEFICIAL EFFECT ON THE EYES FROM THE USE OF THE STEREOSCOPE

By A. Edward Davis, A. M., M. D.

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NEW YORK CITY

FIRST PAPER

In 1833 Sir Charles Wheatstone, of England, invented the first stereoscope. The idea was suggested to him by the study of binocular vision and the theory or theories upon which it rested. Binocular vision means simply the perception of an object with both eyes at one time. In order to see an object with both eyes at once singly, the image of that object as formed in each eye separately must be fused or joined into one common image, thus giving the so-called single binocular vision. The images of distant objects formed on the retina of each eye are practically alike or similar, and it is easier to understand how these two similar images are fused into one than the dissimilar images of near objects which are formed on the retinæ of the eyes, because such images are unlike or dissimilar. That the images of near objects are dissimilar is easily demonstrated by holding the hand edgewise directly in front of the face and looking at it with both eyes open, when the nearer edge and both sides of the hand are seen at once. Now shut the left eye and the right eye successively and it will be seen that the images are quite dissimilar, the right eye seeing the edge of the hand and the right side of it, while the left eye sees the edge of the hand and the left side of it. Nevertheless, when both eyes are open at once these dissimilar images are fused into one single image and we see the hand singly and as one. As Dr. Oliver Wendell Holmes has so aptly put it, "By means of these two different views of an object, the mind, as it were, feels around it and gets an idea of its solidity."

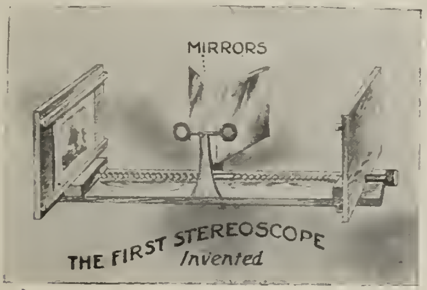


Fig. 1.

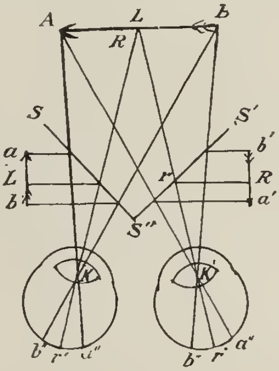


Fig. 1.

Sir Charles Wheatstone conceived the idea that if a small object as a cube, was placed a short distance in front of the eyes, and a diagram as seen by the right eye alone was made, then a diagram as seen by the left eye alone was made and these two dissimilar diagrams placed on a card, the right diagram in front of the right eye and the left diagram in front of the left eye, each being placed the same distance apart as the width between the eyes and the same distance in front of the eyes as the object was originally, these two dissimilar images would be fused into one common image and this image would stand out in relief and appear as a solid body just as the cube itself appeared to the eyes. His idea proved to be correct in every respect. Such being the case, he set about contriving an instrument by which this fact could be demonstrated, and he called the instrument a stereoscope. The name is a combination of two Greek words, meaning to see in solid form or relief, which is admirably accomplished by the instrument.

Diagrams of the instrument both in outline and as a whole are given in Figs. I, I. The instrument consists of two plain mirrors set at right angles to each other and placed in a frame with the angle of the mirrors towards the observer, who looks into the right mirror with the right eye and into the left mirror with the left eye. To the right and to the left of the mirrors are panels to hold the drawings or pictures, the images of which are to be fused into one. The outline drawing shows very clearly how this is done. Say we have so simple an object as an arrow on each card. In the right panel the arrow head, a, is placed backward, and in the left panel the arrow head, a, is placed forward. The arrow head reflected in the right mirror is seen at A, and the arrow head reflected in the left mirror is seen at the same place A; while the tail of the arrow reflected in the right mirror is seen at B, and the tail of the arrow reflected in the left mirror is also seen at B. Thus the images of the arrows are fused into one common image and are seen as one. So it is with all pictures viewed in the stereoscope. Because of the fact that the mirrors reverse the images, in order that the relief of the object may not be reversed, the image intended for the right eye must be placed in the left panel and vice versa.

A few years after the invention of the reflecting stereoscope by Wheatstone, Sir David Brewster invented a stereoscope in which the two images of an object were united or fused by means of lenses instead of by mirrors, and he named it the lenticular or refracting stereoscope, in contradistinction to the reflecting stereoscope of Wheatstone. This instrument, of which a cut both in outline and as a whole is given below, consisted of a small box at one end of which were two prismatic lenses with convex surfaces, with the apices of the prisms turned inward. These lenses magnified the images, and at the same time, by their prismatic action, allowed the eyes to converge as they would naturally, when looking at objects near at hand. At the other end of the box was a place for the views or drawings, and there was a hole in the side of the box to let in the light on them. This instrument was much more compact than the Wheatstone instrument, was portable and cheap, and for these reasons came into popular use. And its popularity was greatly increased by the fact that photography was discovered shortly after its invention. In fact, before the discovery of photography or daguerreotypy, all drawings that were shown in the stereoscope had to be made by hand, and necessarily these drawings had to be

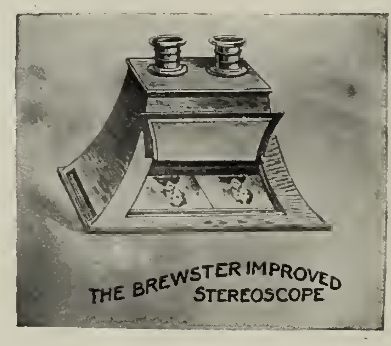


Fig. 2.

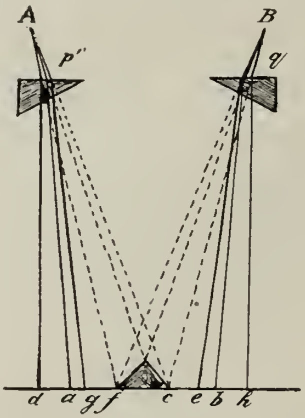


Fig. 2.

of a comparatively simple character, as geometrical figures, cubes, cones, etc., it being impossible to make such drawings of landscapes or complicated figures. But with the discovery of photography this was all changed.

"The late Dr. Oliver Wendell Holmes invented an improved form of stereoscope in 1861, which invention introduced in 1864, soon drove what few were left of the old style 'box' stereoscopes out of the market. Our illustration No. 3 shows the original stereoscope that Oliver Wendell Holmes constructed with his own hands. It consists of a solid wood lens-frame, several slots cut with a saw at the further end of this wide shaft to hold the pictures at various focal distances, a wedge-shaped piece of wood for a division piece, a paste-board hood shaped to fit his own head and a small bead-awl under the shaft for a handle."*

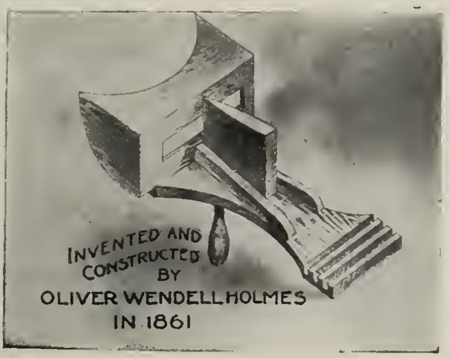


Fig. 3.

Joseph L. Bates, of Boston, improved the Holmes stereoscope by adding a narrow shaft with a sliding view holder, which permitted the pictures to be focussed quickly and at any position on the shaft.

With unimportant changes, except as to appearances and weight, this form of the stereoscope is the one in general use today. Underwood & Underwood, of this city, manufacture a stereoscope in which aluminum and mahogany are used in the frame work, and because of its lightness, durability and neat effect, it has largely supplanted all other stereoscopes for general use. For special training of the eyes of persons afflicted with squint or cross-eye, special stereoscopes have been devised, but I shall speak of these further on when considering the uses of the stereoscope in medicine.

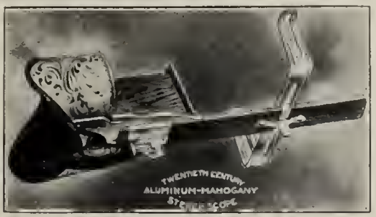


Fig. 4.

BINOCULAR VISION; ITS IMPORTANCE IN THE USE OF THE STEREOSCOPE

Since it is with binocular vision alone that the use of the stereoscope is concerned (no person having lost the use of one eye being able to use the stereoscope properly so as to get the remarkable effects that people with two eyes obtain), a consideration of binocular vision and its importance in the use of the stereoscope is in place here.

As stated in the beginning of this paper, binocular vision means vision with both eyes at once, and depends upon the fusion of the images in each eye into a common image. It was also stated that images of distant objects formed on the retina of each eye are identical or similar, while the images of near objects are unlike or dissimilar.

To understand how these images, especially the dissimilar ones, are fused into one image resulting in single binocular vision has been a problem for philosophers, scientists and oculists for the last two thousand years—and it is still unsolved!

More than two thousand years ago, Euclid fully appreciated the fact that we possessed single binocular vision, and that the fusion of the images of the two eyes into one common image was possible. In his Treatise on Optics*, in Theorems 26, 27 and 28, he has demonstrated how it could be accomplished.

Five hundred years later Gàlen** demonstrated the same proposition by means of diagrams, and concluded as follows:

"But if any person does not understand these demonstrations by means of lines, he will finally give his assent to them when he has made the following experiment:—Standing near a column, and shutting each of the eyes in succession;—when the right eye is shut, some of those parts of the column which were previously seen by the right eye on the right side of the column, will not be seen by the left eye; and when the left eye is shut, some of those parts which were formerly seen by the left eye on the left side of the column, will not now be seen by the right eye. But when we, at the same time, open both eyes, both these will be seen, for a greater part is concealed when we look with either of the two eyes than when we look with both eyes at the same time."[†]

---

*The Stereoscopic Photograph, June, 1901.

*Edit. of Pena, pp. 17, 18, Paris 1577. Cited by Sir David Brewster, The Stereoscope, London, 1856.

**Cited in The Stereoscope, London, 1856.

Baptistà Porta[‡] gave a better illustration of binocular vision, as follows: "Let A be the pupil of the right eye, B that of the left, and DC the body to be seen. When we look at the object with both eyes we see DC, while with the left eye we see EF, and with the right eye GH. But if it is seen with one eye it will be seen otherwise, for when the left eye B is shut the body CD, on the left side, will be seen in HG; but when the right eye is shut, the body CD will be seen in FE, whereas, when both eyes are open at the same time, it will be seen in CD."

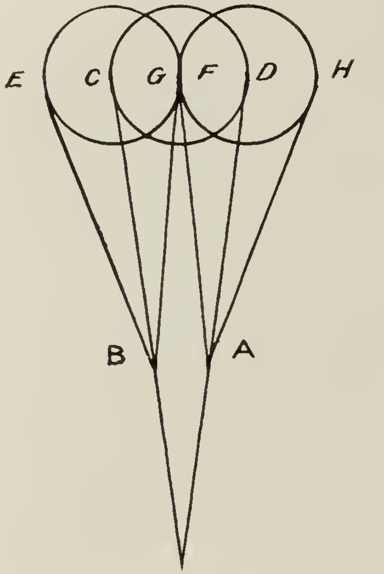
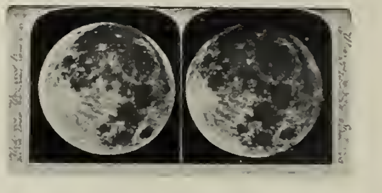


Fig. 5.

Sir David Brewster says of this diagram: "In looking at this diagram we recognize at once not only the principle, but the construction of the stereoscope. The double stereoscopic picture or slide is represented by HE; the right-hand picture, or the one seen by the right eye, by HF; the left-hand picture, or the one seen by the left eye, by GE; and the picture of the solid column in full relief by DC, as produced midway between the other two dissimilar pictures HF and GE, by their union, precisely as in the stereoscope." I may say the stereoscopic view of the moon gives a fine illustration of this same point, and also a good idea of relief, that is, an idea of third dimension.

A Telescopic Photograph.



The Full Moon.

By referring to figure No. 6, which is an outline drawing, a better idea may be had of how objects are represented on stereoscopic pictures than in any other way. The drawing is after Tscherning, and I give his description, since it cannot be improved upon:

"We may suppose two transparent plates (MM. Fig. 6), placed in front of the eye at the place which the stereoscopic image will occupy later, in order to account for the manner in which objects are represented on stereoscopic images. From all the exterior points we suppose straight lines directed towards the eyes. There start thus from each exterior point two of these lines, and the point at which each of these straight lines cuts the corresponding plate is the reproduction of the exterior point. If the latter is at infinity the two straight lines are parallel, and the distance BB, between the two points, is equal to the base line. If we place the two trans-

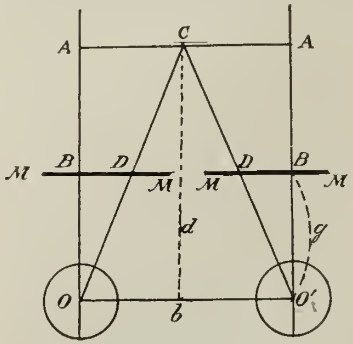


Fig. 6.

[†] De usu Partium Corporis Humani, Edition Lugduni, 1550, pp. 5933. Cited by Sir David Brewster, The Stereoscope, London, 1856.

[‡] Jan. Baptistae Portae Neap. De Refractione Optices parte, lib. p. 132. Cited by Brewster.

parent stereoscopic figures one over the other, so that the two reproductions of the same point situated at infinity overlap, we can make the reproductions of all the points situated at infinity coincide two by two. If, on the contrary, the exterior point (C, Fig. 6) is not at infinity, the distance between the two reproductions is less than that of the eyes. We designate the difference by the name stereoscopic parallax. The parallax increases therefore with the distance between the two eyes, and it is the greater as the object is nearer the observer."*

Although the presence of binocular vision has been known and has been a matter of demonstration for a period of more than two thousand years, yet just how images when formed on corresponding points of the retinæ in the two eyes are fused into one and perceived by the brain as such, is not well understood. Several theories have been advanced to explain it, but only two remain which are worthy of consideration. Briefly they are as follows:

First. The theory of identity, or corresponding points, rests on the assumption of an anatomical relation between identical or corresponding points of the two retinæ. The supporters of this theory claim that the nerve-fibres from two corresponding points of the retinæ unite in a single fibre in the chiasm, and conduct the impression to the brain perception center as coming from a single point, thus giving binocular vision.

Second. The theory of projections is based on the assumption that images situated a certain distance (say 15°) on the right side of each macula are projected or localized at a distance of fifteen degrees to the left of the point of fixation; and vice versa, images situated a certain number of degrees on the left side of each macula are projected the same number of degrees to the right side of the point of fixation, in each instance obtaining single binocular vision.

Images which are situated directly on the macula of each eye are projected or localized directly at the point of fixation.

(To be concluded in next number.)

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*Physiologic Optics, Tscherning. [Amer. Ed.]

POST-DIPHTHERITIC PARALYSIS*

By G. D. Haggard, M. D.

MINNEAPOLIS

Medical research and the resulting literature have added much to our knowledge of this subject. In this, as in every growing, department of science, we are learning enough to desire much more information. Fortunately, great laboratories and many animated and efficient workers are our benefactors in meeting this want.

Post-diphtheritic paralysis is a greater or lesser loss of function of the nerve or muscle, or of both, in some part or parts of the body, and results from damage done by the toxin of diphtheria. It is also possible that accompanying bacterial and tissue toxins affect the condition.

The cause of altered function is the departure from normal of the integral elements of an organ. Hence we confidently assume a lesion where none has as yet been demonstrated. This will seem the more justifiable when we reflect that by recent demonstration we know some of the changes in the granular matter of the nerve cells that had suffered from what had been until now a functional failure only. In diphtheria, both accidental and experimental, any grade of degeneration in muscle and nerve may be found, and again no appreciable lesion be found. A further and pertinent thought in favor of this contention is found in this fact, that a person ill with diphtheria is evidently weaker than before. This severe and rapid loss of power is positive proof of change in nutrition of cells through which power is manifested.

Leaving these finer nutritive changes, we find the nature of the essential lesion of this disease to be a multiple neuritis with segmentation nucleation, and the formation of granular corpuscles of the medullary sheath, and, later, of the axis cylinder of the peripheral nerves,—a true parenchymatous degeneration involving sometimes few and sometimes many of the fibrillæ, with the interstitial tissues escaping. While the peripheral nerves suffer most constantly, sometimes the ganglion cells of the anterior columns of the cord show degeneration, and the patellar reflexes are often lost, even in cases of moderate or mild form. Higher nerve centers, said usually to escape, have been found to contain Klebs-Löffler and other bacteria in and about their blood vessels. Viewing the general depression and early lethargy these centers seldom escape damage.

---

*Read before the Minneapolis Medical Club.

Among the poisons affecting the nerves in a grossly similar manner, we have lead, arsenic, phosphorus, alcohol, caffein, strychnine, and the toxins of anemia, gonorrhea, tuberculosis, typhoid, cancer, nephritis, variola, etc. (I am sorry that I had not access to the work of Adami on the classification of toxins by their pathologic effects.) The greatest essential difference between this and the other neurites consists in the order of the appearance of the paralysis and the accompanying inflammation with parenchymatous and interstitial (granular and fatty) degeneration of the muscles.

Holt says, "The essential lesion of diphtheria is a degeneration of the cells of the body, the first being the peripheral nerves; the second the liver; the third the mucosæ; later the heart muscle, kidney, spleen, lymph nodes, and the arteries. The other lesions, such as pyemia and pneumonia, are due to other organisms."

Incidence of this affection is placed at ten per cent by some, and at twenty-five by others. The use of antitoxin has not altered the ratio. This would lend some force to the assumption that in some measure the affection depends not alone on this one toxin. The onset is usually gradual, but sometimes sudden. It may begin on the fourth day, or as late as the tenth week. It has been seen on the fifth day when no sore throat or membrane was found. Usually a period of convalescence intervenes. Should we recognize the severe asthenia as part of the essential process, many apparently sudden deaths, due often to muscular change in the heart and sometimes to changes in the vagus, would appear less sudden. To me from the clinical side it seems best to view the asthenia, anemia, paresis and paralysis as stages in the one process, due to entrance of toxins, usually mixed; and that these toxins and the diseased structures each enhance the power of the other for evil.

The course of the affection, aside from the cases of sudden fatal ending, is protracted, the caudal paralysis recovering later than those of the cephalic region. The eye soon recovers, the reflex patellar is last to recover. The cases of convalescents called only asthenic and anemic often require three months when early treated for the infection; medium cases of paralyses require three months; and severe generalized paralyses require six months. Such prolonged convalescence easily leads to late nephritis and other states pathologic.

The diagnosis is made from the history, the nasal voice, the loss of liquids from the nose, and the inspection of the palate during phonation. Other regional paralyses usually follow the pharyngeal, involving body, legs, arms, eyes (both motor and ciliary), the viscera (pharyngeal, rectal and vesical), the heart, and the diaphragm. As illustrating much by the history in one instance allow me to report the following case.

Nov. 15, 1900, Miss E. A——, aged 11 years, had not commonly been as well as other children. At this time there were six cases of diphtheria in the house, three of them serious, and one dying, after showing improvement, from repeated severe epistaxis. This case had the usual onset of a severe diphtheria, not rapid, and the course was slow. The treatment included antitoxin, purges, supportives and antiseptic and stimulating throat-washes. On the 25th there was some improvement; the throat was nearly clear; pulse, 108. On the 28th the heart was widely dilated and rapid; there was vomiting, restlessness and extreme prostration. The speech, impaired from the first, became poorer; nasal leakage began; pulse was 134 and very weak. During the next four days cyanosis, severe dyspnea with terrors and profuse sweating came on, and alternated with vomiting; there was almost complete failure of the heart, which at time appeared to have stopped. These conditions moderated, and the patient was then unable to move the legs, and the hands were all but useless; the chest seemed as inactive as the thigh; swallowing was almost impossible; feeding was by the rectum; cough was clearly abortive; it was impossible to spit out the accumulations in the rattling pharynx; the pupils were widely dilated, and the eyes had limited and slow movement; speech almost inarticulate; the face was impassive and mask-like; respiration almost wholly diaphragmatic and irregular, sighing and shallow and the heart gave impure and rapid sounds. When feeding was resumed by the mouth the bowel became as if inert. The patient was out of bed after slow recovery in four weeks more, though helpless as a child. She could walk a few steps in ten weeks, and had apparently fully recovered in six months.

The prognosis of this paralysis is the more grave the more rapid and early the appearance.

The mortality where the heart is seriously affected is near 60 per cent. Affecting the heart in generalized paralysis one seldom recovers. Of the other forms I have no data.

TREATMENT

Since anemia and asthenia must be met in all, and paresis and paralysis in many cases, one should anticipate by giving sufficient doses of antitoxin to neutralize the toxin, and should begin supportives early, and should also aid elimination and oxidation early.

Sachs has said that "Food and the way it is given is of the first import in the post-diphtheritic paralysis; following this is bathing. Massage, iron, especially digitalis, and perhaps small doses of strychnia may be used." And with the air of apology he adds: "The best treatment is to secure the best nutrition possible." In case of threatened respiratory failure, we should use the direct slowly interrupted faradism to the phrenic.

It would seem that in a disease that demands the long administration of remedies, and in which the neuromuscular apparatus is in such state as not to respond to the usual dosage, we should be unusually guarded in the administration of those agents which, as cited above, are capable of producing in these same tissues similar lesions, and thus beget for us failure in the eleventh hour, due to a paralysis not diphtheritic. It may seem hard but sometimes necessary to ascribe the improvement of a case to nature's provision rather than to the drug unless it is clearly due to the latter. We physicians, however, must wait impatiently "for the good time coming" when the researches of bacteriology and pathology shall be duplicated in the field of pharmacology and therapeutics; when the exact effects of drugs shall be determined and their reclassification made on their true effects. Until that time let us emphasize feeding, bathing, massage, sunlight, and air. These most nearly simulate the forces that preserve the lives of our patients and of ourselves.

THE EVILS OF PROSTITUTION

The most important of the conclusions reached by Dr. Sanger in his study of prostitution in New York City are—

1. There are 6,000 public prostitutes in New York City (this was in 1860). In 1897 there were 30,000, according to Dr. Sturgis, and the number has recently been roughly estimated at between 40,000 and 50,000.
2. The majority of these are from 15 to 25 years old.
3. Three-eighths of them are born in the United States.
4. Education is at a very low standard among them.
5. One-fifth are married.
6. One-half of them have given birth to children, and more than half the children so born are illegitimate.
7. The ratio of mortality among the children of prostitutes is four times greater than the ordinary ratio among New York children.
8. The average duration of a prostitute's life of abandonment is four years.
9. Nearly half of these women in New York City admit that they are, or have been, sufferers from syphilis.
10. Six-sevenths of them drink intoxicating liquors to a greater or less extent.
11. A capital of nearly $4,000,000 is invested in the business of prostitution, and the annual expenditure in this traffic is more than $7,000,000. (If these were the figures for 6,000 prostitutes, they cannot now be much less than $25,000,000 and $50,000,000, respectively.)

It is plain that all this horror of syphilis, gonorrhea and prostitution would cease with the cessation of unchastity. It by no means follows that we should aim at prohibition measures. We cannot produce absolute morality by law. The prohibitionist, sincere indeed though he or she may be, is the enemy of real reform and true progress. We must attack the origins of the evil, and secure a little prevention here, a throttling there, and a general education everywhere. —Dr. Geo. M. Gould, in American Medicine.

THE SURGICAL SIGNIFICANCE OF JAUNDICE*

By William J. Mayo, A. M., M. D.

Surgeon to St. Mary's Hospital.

ROCHESTER, MINN.

Jaundice, as a result of diseased states of the blood, the writer has eliminated as irrelevant to this discussion, and will refer only to those forms of icterus due to an impediment to the outflow of bile through the liver ducts. Obstruction to the intestinal delivery of the bile is caused,—first, by swelling of the mucous lining of the ducts due to an infection; second, by gall-stones in the common duct; third, by disease or tumors involving the ducts; fourth, by disease or tumor of the head of the pancreas. Pressure from without the ducts, as in certain malignant growths of the pylorus, may also interfere directly with the biliary flow; and, again, some forms of cirrhosis, either of the atrophic or the hypertrophic variety, may obstruct the smaller liver ducts, cutting off from the main channel the secretion of the part, and result in jaundice. In one way or another, the common forms of jaundice are due to mechanical interference; and by careful attention to the history, with the physical examination, a differential diagnosis may be made. If not pathological diagnosis, at least a surgical one may be made; that is to say, a condition of things which can be relieved surgically, although it may be any one of several forms of disease.

Gall-stones in the gall-bladder do not produce jaundice except under rare circumstances. The rule is that jaundice with gall-stones means a stone in the common duct. The exceptions are, first, an infection of the gall-bladder, which travels along the ducts, producing a cholangeitis, and is usually accompanied by some inflammatory reaction, slight temperature, a quickened pulse, and follows an attack of colic, with or without the passage of a calculus; second, an inflamed gall-bladder (cholecystitis), in which the infection has passed through the coats, and there results a local peritonitis, which acts mechanically upon the bile passages. The jaundice in these cases is not complete, and as a rule quickly subsides.

I cannot too strongly emphasize the fact that jaundice is not to be expected from uncomplicated gall-stone disease. It is altogether a secondary phenomenon.

Stones in the common duct produce a jaundice which is at first incomplete. In the early stages the duct dilates; and when the biliary accumulation is under some pressure, the bile passes the obstruction with colicky pains, and the icterus clears up, somewhat. This may happen several times a day. If the stone be of sufficient size to materially obstruct the passage, the intermittent jaundice takes on a remittent form; that is, it never entirely clears up. In time the duct wall becomes infiltrated with connective-tissue cells, and contracts tightly about the stone, and the jaundice becomes complete.

Stones which pass the cystic duct usually pass through the common duct easily, as the latter is three times the size of the former.

Stones which remain in the main bile passage are therefore either of large size and have been slowly forced into the duct, or are the so-called "ball-valve" stone of Fenger. In the latter case, the papilla of the common duct on the surface of the intestine is a little smaller than the stone, and the stone rolls about in the duct. At times it is at the intestinal orifice, causing a slight colic and increase in jaundice, then rolling away with subjective relief. Such rolling stones are usually accompanied by an infection of the bile passages, and chills slight in character, fever and sweats are a frequent accompaniment.

Many of these cases come to us with a diagnosis of relapsing biliary fever or malaria. It is to be noted that the jaundice is incomplete and of varying intensity. Occasionally the stone gains in size by additions from the infected ducts and biliary deposits, forming a large, soft stone, having as its nucleus the original stone from the gall-bladder. Stones in the common duct cause more or less jaundice,—sometimes very little.

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*Read before the Minnesota Valley Medical Society, December 3, 1901.

We have several times removed stones from the common duct, or a diverticulum of it, in which jaundice was not present.

Jaundice from gall-stones should give a history of previous colics. The physical examination will usually be negative. Contrary to the prevalent opinion, the gall-bladder is shrunken, instead of distended, in the majority of cases. Occasionally it happens that the gall-bladder will be found distended. In such cases it will probably also contain stones. The reason for the shrunken condition of the gall-bladder lies in the great inflammatory thickening of its coats and the contraction of this connective tissue after the stone is expelled.

Jaundice from malignant disease may have a history of gall-stone attacks years before, and the cancer is often due to the irritation of calculi. The jaundice comes on after some indefinite history of abdominal disease, and is preceded by loss of flesh and progressive weakness, without much acute pain. The jaundice slowly, but steadily, increases, and does not change day by day in intensity, excepting to get deeper. On palpation, the distended gall-bladder can often be felt. This enlargement is usually the rounded end of the gall-bladder, occasionally nodular, due to an extension of the malignant process. In the latter stages, a little ascitic fluid can be detected in the abdomen. The age of the patient, over thirty-five, is to be noted.

Chronic inflammation of the pancreas is accompanied by jaundice in many cases, and is often confounded with malignant disease. The previous history may be that of gall-stones or obscure epigastric distress. The jaundice does not change in the early stages as is to be expected in a gall-stone in the common duct, and there are fewer of the repeated colicky pains. It also differs from malignant disease in the fair degree of health maintained for a length of time beyond the expectancy of cancer. The gall-bladder can be felt distended, but without nodules, and the patient may be of any age.

The hypertrophic cirrhosis of the liver of Hanot is a disease of young adults, and the jaundice is slight but persistent. The great size of the liver makes the diagnosis.

Atrophic cirrhosis and allied forms of hypertrophic cirrhosis are usually found in adults. The jaundice, if present, is a late symptom, and ascites is frequent. Here,again, physical examination of the liver and spleen, with the alcoholic history, completes the diagnosis.

To recapitulate:

First. Jaundice is not to be expected in uncomplicated gall-stone disease.

Second. Jaundice from a stone obstructing the common duct gives the history of previous attacks of gall-stone colics, varies greatly in intensity in the early stage, and these changes are accompanied by colicky pains. There can usually be obtained an early history of some little fever, and at times chilly sensation or sweats. The gall-bladder cannot often be palpated.

Third. In malignant disease, the loss of flesh before the jaundice, the age of the patient and the unchanging (except for the worse) of the icteric hue, with a distended and, perhaps, nodular gall-bladder or adjacent tumor, completes the clinical picture.

Fourth. Jaundice from chronic pancreatitis will probably be confused with malignant disease. The possibility of its existence leads to an examination as to the history, the age of the patient and the duration of the symptoms.

Fifth. The various forms of cirrhosis accompanied by jaundice are to be distinguished by the physical examination of the liver and, occasionally, the size of the spleen.

I have refrained from mentioning catarrhal jaundice, with which every practitioner is familiar. It is a disease most common in young adults, and is usually due to an extension of a mild infection from the gastro-intestinal tract. It is sometimes seen in an epidemic form. The age of the patient, the slow pulse, and lack of general symptoms and short duration make the differentiation easy.

Catarrhal jaundice may,in isolated cases, complicate appendicitis, pneumonia, cancer of the stomach and a host of common diseases; but as in these cases it is usually incomplete and transient, it does not long mask the primary source of disease. These secondary conditions, however, are at times most serious, the catarrhal infection developing a purulent cholangeitis, and death resulting from multiple abscess of the liver, with the usual symptoms of sepsis, accompanied by a marked jaundice.

DERMATITIS EXFOLIATIVA FOLLOWING AN ABDOMINAL OPERATION

By A. R. Brackett, M. D.

CHARLES CITY, IOWA

In May of 1899, Mrs. H. M——, aged 55, was admitted to my hospital for operation for a tumor of long standing, she having known of its presence for over twenty years. She received a diagnosis at the hands of her former physician of fibroid, probably ovarian, coupled with the advice that as long as it remained quiescent, it be left alone. This she did until sometime in the preceding winter, when she was tipped from a cutter, and the horse stepped upon her abdomen. She was laid up only a day or two, but soon after there was positive evidence that the tumor was growing. The abdomen filled somewhat rapidly with fluid, apparently ascitic. Examination showed it to be diffuse beyond a doubt.

After coming to me she delayed operation for a special reason until her abdomen was tense, and she began to suffer. As she insisted on waiting I tapped her, and drew off considerable amber-colored fluid, evidently from the growth; and subsequently it was shown that one of the cysts had been ruptured, and was pouring its secretion directly into the abdominal cavity. Her feet and legs were aedematous, showing a marked interference with the return current of blood. Kidneys and heart were normal, and all her other functions satisfactory. There was nothing of special interest in the operation, it being an ordinarily easy case with very slight adhesions, which were readily separated. The tumor proved to be a fibro-cyst of the left ovary, and it was packed tightly into the true pelvis, making great pressure on the blood vessels, but causing no special pain. It was easy to understand, however, why the feet and legs were so swollen. Recovery was uneventful, nothing occurred to mar the result, and not until the twelfth day was there a single symptom of importance. At this time, beginning on the forehead and here and there over the trunk, there appeared a multitude of minute vesicles, exactly resembling sudamina. *There was no fluid in them, nor was there at any time;* and there was *neither fever nor pain,* no acceleration of pulse, and what itching there was gave no special annoyance. Gradually these tiny blebs fused, and the area enlarged, until large spots, an inch or more in diameter, were observed, fresh portions of the body being invaded day by day until the process traveled from the head to the feet. Meantime the earlier areas began to peel, not in scales nor flakes, but huge strips of the external layer of the skin came away, some of them being five to seven inches long, and three or four inches wide. This continued until she literally shed her skin from scalp to toes. For a few days after this exfoliation the new skin was sensitive, but not really painful. In fact the only thing that caused any marked discomfort was around the eyes, where there was a slight reddening and quite severe itching and burning. On no other part of her body was there any apparent irritation during the entire process, and at no time was there any constitutional reaction. She was closely watched, too, and her temperature and pulse were taken and recorded every three hours, both night and day.

The exfoliation made no trouble with the wound at any time. Somewhere between ten days and two weeks the peeling process was practically complete, although on her legs and feet shreds kept coming off for some ten days longer. No treatment was given, except to anoint the surface with cold cream, and oxide of zinc ointment around the eyes. The skin continued somewhat sensitive for three or four weeks, and then all discomfort disappeared, leaving her perfectly well, and with a skin as fair and soft as that of a young girl, and so it still remains. I can find no literature on the subject, nor have I been so far able to find anyone who has seen a similar case.

In conversation last summer with Dr. Buckley, of New York, a man of vast experience as a dematologist, he said that this case was an exceedingly rare, and that he had never seen an exactly similar one.

It was a true dermatitis exfoliativa, but certainly not a case of pityriasis rubra, for there was nothing inflammatory about it. The pathology is as cloudy as the condition itself. I have tried in vain to elucidate the question to my satisfaction, and I am forced to confess that I do not know, unless it be dependent upon the long time obstructed return circulation. The pressure from the firmly-wedged mass in the pelvis must have had a marked influence upon the vasomotor structures during the many years when the tumor was in situ; with the relieving of this pressure and consequent acceleration of blood current and accompanying dilatation, some neurotic element was brought into action. Just what this element is, or was, is not easy to define, and the case seems to stand unique. It would comfort our professional soul if some one of our learned brethren with a knowledge of nerves and pathology would solve the problem and name the condition and the cause.

ATYPICAL ECTOPIC GESTATION*

By A. W. Abbott, M. D.

Clinical Professor of Diseases of Women, University of Minnesota

MINNEAPOLIS

So many cases of extra-uterine pregnancy conform to a pretty uniform train of symptoms that we may reasonably say that they establish a type. So far as yet proved all ectopic gestations have originally developed in the tube. As the pathology is always essentially the same,—i. e., a decidua without embryonic elements in the uterus and maternal with embryonic elements in the tube,—atypical characteristics will depend on the symptoms rather than on the pathology. The important symptoms in a so-called typical case are a passing of, at least, one menstrual period, followed by a prolonged, stringy, bloody discharge; unilateral colicky pains at frequent intervals; rectal and vesical irritation; a normal pulse and temperature; and a tender mass on one side of the pelvis, to which must be added violent pain and abdominal collapse with rapid pulse, and still a normal or subnormal temperature in case of rupture.

A marked variation from this series of symptoms constitutes one atypical form. Thus cases have been reported in which none of the above symptoms were present, with no history even of collapse. The writer removed some fetal remains from the pelvis of a woman who could give no history whatever of any symptom pointing to extra-uterine pregnancy. She was anemic, and had a boggy mass in Douglas' sac. Many cases are on record where the only indication was in the rupture symptoms. Last March the writer saw a case within two hours after rupture, in which the temperature, instead of being normal, was 104.2° F., and was normal immediately after operation. In another case the pain, instead of being paroxysmal and colicky, was constant and distributed over the whole left trunk, and was not relieved by the operation, nor could it be controlled by frequent ½ gr. doses of morphine hypodermically administered. In pregnancy occurring in the uterine part of the tube rupture is likely to occur before a period is passed, and no mass can be felt in the pelvis. It will thus be seen that very marked variations may occur from any or all of the symptoms of the usual type.

The most confusing conditions arise in complications with carcinomata and myomata of the uterus, and with normal pregnancy. In carcinoma and myoma the irregular bleeding and pain so mask the symptoms that the pregnancy is almost never recognized, except when rupture takes place or when operation is made for the tumor. The form of the tumor also generally makes satisfactory examination of the tubal region an impossibility. Gestation in the undeveloped horn of a bifid uterus is practically extra-uterine, and gives rise to physical signs which are confusing enough to place it in a class by itself. Dr. M. F. Porter, of Fort Wayne, Ind., reports, in the Nov., 1901, Am. Journal of Obstetrics, an interesting and well-studied case.

The complication of normal pregnancy with the ectopic form places these cases in a separate class. The signs of pregnancy are present, of course, but the physical signs of a normal pregnancy are there to account for it. The bursting tubal pains, and collapse in case of rupture, are about the only indications of the extra-uterine complication. In a case in the care of Dr. R. O. Beard, the doctor made a positive diagnosis of tubal pregnancy. Dr. J. E. Moore, in consultation, confirmed the diagnosis, but with some reserve. The writer on examining the pelvis was impressed with the indications of a normal pregnancy, and expressed an uncertainty as to the tubal complication, and yet concurred in the opinion of the other consultants that an operation was advisable on account of the doubt. The operation proved that Drs. Beard and Moore were correct, and the passage of a placenta with membrane, about three weeks after, showed that the writer was also not mistaken, and yet it is doubtful if either of us had clearly realized the full situation—certainly the writer had not.

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*Read before the Minnesota Valley Medical Society, December 3, 1901.

Simultaneous bilateral tubal pregnancy, while affording symptoms sufficiently characteristic to place it in a type by itself, is fortunately so rare that it is enough only to mention it. As will be noticed, these remarks apply to the earlier stages of extra-uterine pregnancy, as the course of the abnormality is not subject to much variation after rupture, if the fetus is viable.

The consideration of the subject from the standpoint of this paper emphasizes the importance of having constantly in mind the possibility of extra-uterine pregnancy in any case of pelvic disease where there is a possibility of conception.

Subcutaneous Nodules.—Attention has been drawn by English observers, notably by Barlow and Cheadle, to subcutaneous nodular growths of fibrous tissue, as an occasional manifestation of rheumatism in children. These nodules are not commonly found, but when present are to be looked upon as of grave significance, because "they indicate that a similar process of inflammatory change and proliferation is going on in the fibrous tissues of the cardiac valves or pericardium." Holt says in his text-book that he made a rule to examine all rheumatic patients for these nodules, but has seen them in only two or three cases.—William Fitch Cheney.

INFLUENZA AND ACUTE MASTOIDITIS

This infection, la grippe, has a curious way of affecting and penetrating certain tissues, cavities, and locations of the mucous membranes which is peculiar to itself. I have seen following the attack of la grippe, or associated with it in most rapid succession, an involvement of the middle ear, this involvement being of an infectious nature and rapidly going on to suppuration. I have seen both middle ears involved, with associated involvement of both mastoids, the involvement being rapid and virulently infectious." Knapp says: "La grippe is a frequent cause of mastoid caries," and reports a number of cases in support of his views.

A point of great importance to be kept in mind in dealing with this particular infection is the great rapidity of its progress and its usually virulent nature.

In my humble opinion I believe la grippe infection is responsible for more cases of acute suppurative mastoiditis than either scarlatina, measles, or diphtheria. My clinical experience bears me out fully in this statement.

In the variety of grippal infection with suppuration, the writer is radical. From the fact that suppurative influenza otitis almost always runs an acute course up to the inception of the dangerous complications, and being convinced that the antrum is early invaded by the suppurative process and, in rapid succession, the mastoid cells, I do not feel justified in prolonging conservative treatment. Early and free incision of the drum membrane, warm douching every two hours for cleansing purposes, rest, and catharsis, constitute my early treatment. In my experience if this does not yield palpable results in thirty-six to forty-eight hours the case will be one for surgical interference.

In conclusion I wish to emphasize the fact that in influenza we get two distinct types of tympano-mastoiditis: First, the suppurative, which invades the tympanum, antrum, and cells almost simultaneously, in an unusually virulent and destructive process, which calls for early surgical treatment and in which abortive measures are contraindicated. Second, the hemorrhage, with very pronounced symptoms at first, but which yields readily to abortive measures, and, in the writer's experience, only about 5 per cent go on to suppuration requiring radical interference.—Am. Jour. Med. Sciences.

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MAY IT CONTINUE

General Prosperity, that genial stimulator who sends a thrill of enthusiasm over all with whom one comes in contact, is coursing through the land. His stride is extensive, and his blessings are spread with a Ganymedean sprinkler. The business world has accepted his showers, as is shown by the rapid growth of the world's affairs. The professional savant has profited correspondingly, demonstrating his hopes and success in the various professional fields. The faddists and cranks participate in the general whirl of excitement, and are lifting their voices in vain attempts to attract public attention. Lawyers are fighting for and against trusts, the doctors are fighting disease, and all vie with one another in their efforts to gain the front seat in the professional audience. Criticism is freely offered by those who think they know more about some one else's business than their own. So the rush goes by, full of fun, ginger and vitriol. The days are full of excitement, worry and work. How soon the circle will bring about a different phase of events, no man can tell. It is all in a lifetime, joy or sorrow, work or idleness, poverty or wealth, prominence or obscurity, satisfaction or despair; and the world moves on so that those who are below may be on the crest, while those who have occupied the higher plane may be thrown by the spinning of the wheel into depths unexplored.

All this means that it is best to take advantages when they appear, hold on to them with a firm grip, and profit by the mistakes of others,—to do the work that you are best adapted to with vim, vigor and vehemence, and let the others do their work in their own way. Be saving, yet comfortable, make your investments in legitimate fields rather than in windbag speculations, be charitable to your fellow laborers, cultivate peace and happiness with and for others, for so sure as you do these things your new year will be happy, healthy, and prosperous.

CURRENT EVENTS

The editorial page of the Journal of the A. M. A. comments on a lecture given in Paris by Professor Lombroso, the celebrated Italian anthropologist, in which he used casts of craniums kindly furnished him by Virchow. Evidently the spirit of phrenology prompted his efforts, for he apparently arrived at some of his conclusions by the fingering of bumps, as well as hearsay evidence acquired through the newspapers. The methods described are much the same as when a self-constituted bump-feeler reads and charts your future for two dollars a sitting. If you happen to call for a second reading, you find the versatile professor has a different opinion of your character and capabilities. Lombroso decided that most of the casts were those of criminals or lunatics. The Czar of Russia escaped with a diagnosis of being harmlessly innocent, and King Edward VII was a little above the average of mediocrity. The Emperor of Germany was a born tough, full of hot stuff, who, under ordinary circumstances, would have been hung. The Sultan of Turkey was cut out for a sneak-thief. Fortunately, the lecturer was cut short for want of time, or all of the crowned heads would have fallen in estimation if Lombroso had continued his dissection.

This sort of comment is wholly unscientific, is based largely upon lay information, unreliable and misleading, and has the odor of the phrenological quack. When a man attempts to make a diagnosis without all of the facts before him, it is purely guess-work, and reflects discredit on his efforts. The days of careless diagnosis are receding, just as the one-time phrenologist, who changes his mind two or three times over the same individual, has become a back number. The cunning divine who went to a bump-reader in his farm clothes, unshaven and awkward, got the reading of the character he attempted to represent. Two hours later, well dressed, shaven and with a jaunty air, he was received as a new victim and given a high-grade character full of the greatest capabilities. So it is with medicine. We are frequently deceived by appearances.

Two cock-sure cures for deep-seated cancers have received the usual amount of free advertising. One is the *x*-rays, exploited by men who see the deepest tentacles by their machines, and claim to have demonstrated to their own satisfaction that cancers can be cured by this method. Undoubtedly the *x*-rays are capable of exercising an influence that may become surprising, yet it is too early to accept conclusions in regard to such a serious malady. That the *x*-rays relieve or improve certain diseases of the skin, and influence its nutrition, is fair to presume, but that it destroys malignant growths is still unproven.

The second cure for cancer is the so-called violet cure. This rediscovery of a remedy used ages ago, as other herbs, plants and metals were used when medicine was a less exact science, has been heralded to the world through the papers as a positive, painless, and cheap remedy for the cancer sufferer.

When the doctor is in doubt as to the malignancy of a growth, or the diagnosis is made by the patient or an Eddyite, the delicate-hued and fragrant flower is a pleasing poultice, and, when coupled and strengthened by hopeful suggestion, will frequently cause the disappearance of a some-kind-of-growth, and thus bring a careful physician into disfavor, or elevate the patient's estimation of his own powers of diagnosis and his friend's remedy into favor.

All of these fads are interesting points for discussion, but the discussion should be left with the layman, who will arrive at a satisfactory conclusion without the help of the physician.

The various fads and fancies of the past year are rounding themselves up for their annual report, and one may be sure it will show a proper balance in their favor. The antivivisectionists and antivaccinationists in their paper called the Animal Defender are having a warm time in their efforts at misrepresentation by the scattering of literature that will not bear dissection, and should be vaccinated before it reaches the reader.

The Christian Scientists are bragging about their superior religion and their marvelous cures, omitting to record the number of those faithful followers who have "passed away" under their misguidance.

The remaining cults are promoting their interests in their own interesting way, and the world goes on with automobilic speed, and an occasional break-down for lack of gas or power; and so it is with all the fads.

Contrast these expenditures of energy with the sanitary scientists who are working under pressure, and are often inadequately paid, to promote and protect the health of the public, which incidently includes all those who believe there is no such thing as sickness or disease, or who choose a remedy of uncertain worth. One of their most commendable efforts is the protection of the traveling public, requiring cars to be properly fumigated, closets improved, bedding cleansed, extra utensils, tanks of sterilized or boiled water, separate cars for sick people provided, and the prevention of the spitting nuisance!

Which class of health promotors will do the most good, the faddist or the sanitarian?

Well, here's to us all. May the best man win, and may all enjoy a Happy New Year!

THE STEREOSCOPE AND THE EYES

The very able article upon the stereoscope, the first part of which appears on a nother page, was written by Dr. A. Edward Davis, a prominent New York ophthalomogist, and will be found interesting, not only to the oculist, but also to the general practitioner and even the lay reader. Dr. Davis is especially capable of treating the subject, having had a great deal of experience with strabismus, and having paid particular attention to the non-operative treatment of this symptom of an error of refraction.

In former days when a patient presented himself with a convergent strabismus, he was put, without preliminary test, upon the operating table, and one or both internal recti were tenotomized, and the patient sent on his way rejoicing. The sequel of many of these cases, some months or years afterward, was divergent strabismus. Convergent strabismus, when seen early, can usually be straightened without operation, and many such cases, if operated upon, will ultimately become cases of divergent strabismus. And every case requires careful study to determine just what means are required to produce the best results from the standpoint, not alone of cosmetics, but of single binocular vision. Not only is there the question of non-operative or operative treatment to be decided in each case, but the question of what operation is best.

The subject is one of tremendous importance, and the profession is indebted to Dr. Davis for the valuable papers he has given them upon strabismus and its scientific treatment.

F. C. Todd.

CORRESPONDENCE

INQUIRIES ANSWERED.

Minneapolis, Dec. 24, 1901.

Editor of Northwestern Lancet:

In reply to numerous inquiries received relative to the stock solutions used in the color-scale for estimating the amount of hydrochloric acid in the stomach contents, described in my paper on Gastric Cancer, in the Lancet of October 15, I would advise that an acid of known strength be used, preferably the U. S. P. chemically pure hydrochloric acid, composed of 31.9 per cent (by weight) of absolute acid in 68.1 per cent (by weight) of distilled water of 1.63 sp. gr. The acid should be taken from a full, fresh bottle, and to obviate error a large quantity should be prepared, in order that a small variation in the density of the acid or in its measurement may not be unduly multiplied. The c. p. hydrochloric acid represents only 31.9 per cent of absolute acid, consequently we use 3.1348 times as much of it in making our solutions.

Having carefully prepared the stock solutions, they should be kept in glass-stoppered bottles and in a dark place. The tubes containing the solutions representing the color-scale should be tightly corked and kept in a dark place when not in use, and should be replenished once in three weeks.

It should be borne in mind that this method takes cognizance of only the free hydrochloric acid, hence the necessity for a non-proteid meal, in order to estimate the entire amount of hydrochloric acid secreted by the stomach.

In preparing the rice-cakes, the rice should be thoroughly cooked in water, then moulded into small cakes and slightly baked. Prepared in this manner they are not unpalatable. Our rule is to give the test-meal at the office, which should consist of two ounces of rice-cake and a glass of water.

Prof. Hemmeter calls attention to an injustice done him in the paper, in asserting that he views atypical mitosis of the cells, secured by gastric curettage, as pathognomonic of carcinoma. On the contrary, on more careful investigation, I find that, in his usual conservative manner, both in his excellent book and in the article referred to in my paper, he simply emphasizes the important diagnostic significance of their presence. I sincerely regret the error, and most cheerfully correct the same.

John W. Bell.

1037 Andrus Building.

COURVOISIER'S LAW

Minneapolis, Dec. 23, 1901.

Editor of the Lancet:

In your report of the proceedings of the December meeting of the Academy of Medicine it appears that Dr. Dunsmoor presented some gall-stones and made some remarks thereon. I arrived too late to take part in this portion of the proceedings, and therefore I would like to reopen the discussion, in so far as it relates to the condition of the gall-bladder with a stone obstructing the common duct.

Dr. Dunsmoor states that the gall-bladder was distended. It does not clearly appear as to whether the gall-bladder wall exhibited the signs of inflammation or not, or whether or not there had been, during life, attacks of inflammation that could lead to contraction. Now, the question I wish to raise is as to the condition of the gall-bladder with obstruction due to stone in the common duct, on the one hand, and the condition of the gall-bladder in case of obstruction of the common duct by cancer, on the other; i. e., that the gall-bladder is contracted in the first and dilated in the second is a diagnosis law to be relied on.

Is the status as related by Dr. Dunsmoor usual—or so usual as to invalidate the law? In a recent number of The Medical News (Nov. 30, '01), Dr. Richard C. Cabot takes the American profession to task for not having generally recognized the value of this differential law as expounded by Courvoisier.

A limited personal experience would confirm the last part of the law, viz., that obstruction of the common duct by cancer does not lead to infection, and inflammation of the gall-bladder walls in such mode that they will subsequently contract. On the other hand, stone does not by any means always lead to such changes in the gall-bladder walls, and, as a consequence, the gall-bladder may remain distended—and this in a sufficiently large number of cases to invalidate the rule; that is, early incision is necessary to see whether the obstruction is stone or cancer.

C. H. Hunter.

BOOK NOTICES

NOTHNAGEL'S ENCYCLOPEDIA OF PRACTICAL MEDICINE. Typhoid and Typhus Fevers. By Dr. H. Curschmann, Professor of Medicine in Leipsic. Edited, with additions, by William Osler, M. D., F. R. C. P., Professor of the Principles and Practice of Medicine, Johns Hopkins University, Bâltimore. Handsome octavo, 646 pages, 72 valuable text illustrations, and two lithographic plates. Cloth, $5.00 net. Philadelphia: W. B. Saunders & Company.

This book is volume one of Prof. Nothnagel's monumental encyclopedia of subjects relating to internal medicine. Of its 646 clearly-printed and well-edited pages, 472 are devoted to "Typhoid Fever," the subject of constant and often of anxious interest to every practitioner of the Northwest. This space is nearly tenfold that allotted the subject in our one-volume text-books.

This monograph on typhoid fever—for such it really is—is by Dr. Curschmann, who is at the head of the great medical clinics of Leipsic. The work is translated into smooth and readable English by Dr. Stengel, of Pennsylvania University.

The purchaser of this volume gets much more than the purchaser of the original German volume, for Dr. Osler, the editor, has added, as continuous reading matter with the original text, much new and important matter, especially that pertaining to the distribution of the typhoid bacilli in the body and the excretions and in localized lesions, as in the bones, heart, etc. The surgical aspects of the disease are fully covered by the aid of Keen's monograph. The important subject of perforation and peritonitis forms practically a new chapter. Other important additions have been made in diagnosis by bacteriologic methods.

The usual divisions of the subject have been followed, opening with a historic note, in which, by the way, due credit is given two Philadelphians, Gerhard and Pennock, who were pupils of Louie.

A chapter on etiology opens with a few pages on the evolution of our knowledge to its present stage. Then follows a biology of the typhoid bacillus, the routes by which the bacilli leave the body, the channels by which they regain access, and the manner and mode of dissemination. In the course of this chapter the epidemiology is exhaustively discussed from both clinical and laboratory experience.

It may be remarked in passing that the drinking of beer, and even of whiskey, is not encouraged as prophylaxis. Then factors relating to the individual are fully discussed. There follow forty odd pages on the pathology of the disease. The next 160 pages are devoted to symptoms and complications.

Some important observations are made on the period of incubation. Numerous temperature charts are given in these exceedingly interesting pages.

The reduction of the death-rate from 18.8 per cent as given by both Griessinger and Murchison to 9.3 per cent and 7.5 per cent as given by Curschmann and John Hopkins Hospital, respectively, is noted. This improvement is attributed more largely to improved methods of diagnosis, whereby a large number of very mild cases is included in the statistics, rather than to improved methods of treatment or to a decreased violence in modern epidemics.

The very much greater prognostic value of the pulse over the thermometer is emphasized. Two cases of sudden death are detailed, in which a post mortem showed myocarditis.

The discussion of diagnosis, differential diagnosis, and diagnostic methods, covers the next thirty pages; "observation at the bed-side still retains the first place in diagnosis."

Prophylaxis is disposed of in nine pages.

Of inoculation it is said: "On the whole experience so far is strongly in its favor."

The final chapter is devoted to treatment. Cold comfort is given serum-therapy and intestinal antisepsis, and, accordingly, great attention is paid to nursing, diet and symptom-therapy. Hydrotherapy is given the first place. Alcohol is considered indispensable. The Woodbridge treatment is not mentioned.

The last 200 pages of the book is an exhaustive study, by the same author, of typhus fever. There is the regretful, but hopeful, admission of ignorance as to the exact cause of this disease, and, in consequence, the discussion as to its exact modes of dissemination is hazy.

Three chromolithographs are given comparing typhus rash of 24-hours standing and of five days with typhoid rash. Personal observations of the author illustrate the text.

The bringing out of this entire series of books seems to the reviewer a bold undertaking. Recent years have supplied both the English and the American market with good encyclopedias of medicine, still a little consideration will convince anyone that these books supply a full, sound and even indispensable medical literature that could well replace some of less mature nature that crowd our markets. We trust the courage of the publisher may be justified by the appreciation of the profession.

It is the plan of the publishers to bring out at once eight or ten volumes of the encyclopedia, representing the most practical part of the great German work. The special and strictly scientific volumes will follow in due time.

The work will be sold as a whole or by the single volume.

C. H. HUNTER.

REPORTS OF SOCIETIES

HENNEPIN COUNTY MEDICAL SOCIETY

A. E. BENJAMIN, M. D., SECRETARY.

A semi-annual meeting of the Hennepin County Medical Society was held in their rooms in the Andrus building, Dec. 2, 1901. The meeting was called to order at 8:15 p. m. by President H. L. Staples.

On the call for the reports of committees, the Library Committee made its monthly report. The committee recommended a plan for notifying country doctors of the existence and working of the Nurses' Bureau. On motion of Dr. Abbott, the committee was empowered to prepare notices, and mail the same to the country physicians. The committee also reported eighty nurses registered in the Bureau.

The following names were proposed for membership:

Dr. A. J. Ames.
Dr. Kohler.
Dr. E. S. Kilvington.

These were referred to the Board of Censors.

Dr. Hill, as chairman of the Board of Censors, recommended for membership the following, and all were elected:

Dr. J. A. Watson, 1034 Andrus Bldg., Minneapolis.

Dr. B. J. Ellis, 1535 Franklin Ave. S., Minneapolis.

Dr. L. C. Mitchell, 819 Guaranty Loan, Minneapolis.

Dr. Robert E. Farr, Fourth Av. S. and Franklin, Minneapolis.

Dr. Louis H. Fligman, 410 Syndicate Arcade, Minneapolis.

Dr. Elizabeth Woodworth, 66 Syndicate Block, Minneapolis.

Dr. P. A. Aurness, 420 Syndicate Arcade, Minneapolis.

Dr. A. A. Cirkler, 420 Syndicate Arcade, Minneapolis.

Dr. Earl R. Hare, 717 Fourth st S. E., Minneapolis.

Dr. F. J. Savage, City Hospital, Minneapolis.

Dr. John E. Campbell, City Hospital, Minneapolis.

Dr. C. W. Malchow, 806 Andrus Bldg., Minneapolis.

Dr. Thos. G. Lee, University of Minnesota, Minneapolis.

Dr. Chas. F. Disen, Syndicate Arcade, Minneapolis.

Dr. Marion A. Mead, 411 Pillsbury Bldg., Minneapolis.

Dr. E. H. Parker, 809 Andrus Bldg., Minneapolis.

Dr. Soren P. Reese, 1037 Andrus Bldg., Minneapolis.

Dr. Leslie O. Dort, St. Barnabas Hospital, Minneapolis.

Dr. Danforth C. Cowles, Andrus Bldg., Minneapolis.

Dr. Catherine E. Putnam, 610 Syndicate Arcade, Minneapolis.

Dr. Floyd M. Day, 3020 Hennepin Ave., Minneapolis.

Dr. H. M. Bracken, Pioneer Press, St. Paul.

Dr. H. N. Leland, 1533 E. Franklin, Minneapolis.

Dr. Hill also recommended for honorary members Dr. W. J. Mayo, of Rochester, and Dr. Walter Courtney, of Brainerd. The secretary was instructed to notify them of their election to honorary membership.

Vice-President Dr. F. C. Todd then presented his address "Examination of School Children's Eyes." (See Lancet of Dec. 15, 1901.)

Dr. Pineo, as chairman of the committee appointed to devise plans for the examination of the school children's eyes, gave a majority report, which appeared in the last issue of the Lancet. Drs. Brown and Simpson made minority reports.

Dr. Abbott suggested that this committee meet again, and endeavor to make a more unanimous report.

Dr. Todd did not think that more harmonious action would be possible, and it was his opinion that the principals of schools could learn to examine the school children's eyes for all practical purposes as well as the general practitioner.

Dr. Pineo expressed the same opinion.

Dr. Hunter asked why the plan adopted by Dr. Allport was not continued.

Dr. Todd replied that there had been no one to carry out Dr. Allport's idea.

Dr. Phillips thought it a good business plan to have the school children's eyes examined by the principal, and when vision was found defective, the child might be given a card with the names of all the reputable oculists in the city, with their prices for examination, and this card be sent to the parents.

Dr. Kelsey thought if the men who understand this work did not agree, that we, as general practitioners could not, and he moved that the report be laid on the table. The motion was not passed.

Dr. Sweetser thought this was quite a serious matter, and did not know as it was proper for the Hennepin County Medical Society to adopt any certain plan, until the oculists could agree on some plan. He thought there were not more than from three to four thousand school children to be examined, who had not been previously examined.

Dr. Dunsmoor believed it was necessary to have some plan for the examination of the school children's eyes, and approved of the majority report.

Dr. Pineo said there was only one of that committee appointed who did not believe in the plan, and since Dr. Brown had approved of the plan outlined in the majority report with the exception of having the principals make the examination, he thought the majority report should be adopted. The motion was then made and seconded that the majority report be adopted. This motion was carried.

Dr. Abbott then read an interesting paper on "Intestinal Fistulæ." It being quite late, the paper was not discussed.

Dr. Day, as one of the solicitors for the additional funds for the library, reported that they had collected $75. It was moved and seconded that the committee buy suitable books with this money, and present them to the society.

The society then adjourned.

MISCELLANY

INJURIOUS EXERCISE FOR CONSUMPTIVES

It is an error for a phthisical patient to ride horseback, drive or take exercise until he has approximately regained his normal weight and is practically free from cough and expectoration. The first two retard his gain in strength and flesh, and they all tend to increase cough, expectoration and temperature. When softening appears to have ceased and the weight is normal, or thereabouts, exercise can be begun very gradually. But until that time arrives rest is Nature's remedy for the conservation of strength. The same rule applies to chest exercises as to exercise in general. Exercises to increase the capacity of the respiratory apparatus are positively injurious while there is fever and softening. In an incipient phthisis which has not gone as far as softening, chest exercises are invaluable. In an arrested case, after softening has ceased, they do much toward clearing up the lungs.—Dr. C. G. Campbell.

TYPHOID FEVER AND FILTERED WATER

By the typhoid standard the Albany plant has been proven an immediate and certain success. The average yearly deaths from this cause for ten years (including four months of filter use) has been eighty-four. The number of deaths last year was thirty-nine. Of these thirty-nine, fourteen were unmistakably alien or imported cases, for which the city's condition is not responsible. In previous years, when an epidemic of typhoid has occurred up stream, either in Troy or Cohoes, an increase of cases has occurred in Albany. The last year was an exception to this rule, and notwithstanding decided increases in both of the cities above us on the river, Albany decreased 54 per cent in its number of deaths.—Albany Medical Annals.

VIRULENCE OF TUBERCLE-BACILLUS

Accepting it as proven that the bovine tubercle-bacillis has, as a rule, considerably greater pathogenic power than the human bacillus for a large majority of experimental animals, how should we interpret this in regard to man? Is it fair to conclude that this increase of virulence will hold good for man also? Until the contrary is proven, or until good reason for believing the contrary is shown, it is in my judgment right that this conclusion be held, at least as a working hypothesis. I am aware of the objections to this view that will be raised by some, and acknowledge freely that it cannot be accepted as conclusive. Virulence is, no doubt, a factor which is relative to the subject, and exaltation of virulence for one species does not necessarily prove an increased virulence for other species. Indeed, the reverse is true in some instances. However, it cannot be denied, as a general rule, that when the virulence of a pathogenic organism is increased for one animal it is increased for all that are naturally susceptible to its action.

The tubercle-bacillus is unique in the extent of its pathogenic activity, both by direct experimental inoculation as well as by infection under what may be considered more or less natural conditions. The list of animals in which tuberculosis has been observed in parks and zoological gardens is appalling, the discoveries of Dubard and others showing that not even the cold-blooded animals are exempt from this universal scourge. While it may be said of the tubercle-bacillus that in cultures in the laboratory it is unusually tenacious of its characteristics, it is certain that in nature it has a wide range of adaptability as a pathogenic agent. Hence for the tubercle-bacillus, perhaps more than for any other known microbe, we are justified in believing that an exaltation of virulence for practically all experimental animals will hold good in the case of man also.

The question can be determined definitely only by direct inoculation of man. To do this experimentally is, of course, impossible, consequently we are forced to rely for evidence of this nature on those accidental cases which occur from time to time. It has been my fortune to have three such cases come under my observation, in each of which the infecting organism was known positively to be of bovine origin. Similar cases have been reported by Tscherning and Pfeiffer, the latter ending in general infection and death. To these may be added two cases observed by Dr. M. B. Hartzell, of the University of Pennsylvania, though in both absolute proof of the bovine origin of the offending organism is lacking. Both occurred in healthy men employed by one of our large American railways to clean and repair cars used in the transportation of cattle. In both a well-developed tuberculosis of the skin followed slight wounds of the back of the hand inflicted by broken timbers. In one case the local disease was soon cured and no further trouble resulted. The other, however, ended fatally after about a year, through the infection becoming generalized, with involvement of the lungs. This patient was a robust man, forty-four years old, weighing 175 pounds, with good family and personal histories. Dr. Hartzell felt able to exclude with reasonable certainty any other source of infection.

Cases such as these permit us to deny with authority the claim which has been made by certain persons that by long residence in animals of the bovine species the tubercle-bacillus becomes so changed as to render it incapable of successful residence in the tissues of man. In all of these instances the bovine bacillus grew and multiplied under conditions known to be most unfavorable to it, with the production of characteristic lesions, and in two of the seven cases gained access to the internal organs, causing death, a result which is unusual when the local lesion is due to infection from human sources. While the number of cases is too small to enable us to draw sweeping conclusions, the indications are that by this mode of inoculation the pathogenic power of the bovine bacillus is at least as great as that possessed by its human congener.—Dr. M. P. Ravenel, of the University of Pennsylvania.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. S. E. Howard, of Eyota, has located in Rochester, Minn.

Dr. H. C. Stuhr, of Argyle, has located in Crookston, Minn.

Dr. E. W. Bagley, of Forest Lake, has located in New Ulm, Minn.

Dr. R. F. Whetstone has moved from Argyle to Cass Lake, Minn.

Dr. S. D. Sour, of Zumbrota, Minn., expects to locate in Minneiska.

Dr. R. C. Dugan, of Eyota, Minn., has been sick with typhoid fever for some weeks.

Drs. R. I. Hubert and A. D. Whiting, of St. Cloud, Minn., have gone into partnership.

Dr. D. E. Rogers, a graduate of the Harvard Medical School, has located in Fargo, N. D.

Dr. W. S. Leech, of Foley, will return to Brooten, Minn., where he formerly practiced.

Dr. C. W. Locke, of Garretson, S. D., has been obliged to leave the state on account of poor health.

Dr. James A. Garver, of Dodge Center, Minn., one of the pioneer physicians of the state, died last month.

Dr. Robert Farrish, of Sherburne, Minn., has gone to Rochester to spend several months in St. Mary's Hospital.

Dr. F. H. Stuart has given up practice at Ada, Minn., and has gone to Germany to study the eye, ear, and nose.

Dr. M. L. Mayland, of Faribault, Minn., was married last month to Miss Josephine O. Sullivan of the same place.

Dr. L. W. Cooke, of Parker, S. D., has returned to his practice after taking a post-graduate course in Chicago.

Dr. W. D. Calvin has taken the practice of Dr. W. A. Angell, of Canby, Minn., during the former's absence in the east.

Dr. C. H. Kermott, who has been Indian agency physician at Ft. Totten, N. D., for ten years, died last month of pneumonia.

Drs. Holman, formerly of St. Clair, now of Mankato, have moved into new quarters at the corner of Jackson and Broad streets.

Dr. F. J. King, of Hoople, N. D., will spend a year in Europe in special study, and does not expect to return to Hoople for practice.

Dr. L. L. McCurdy was elected president, and Dr. W. J. McCarthy, secretary, of the Watonwan County Medical Society for the current year.

Dr. Geo. D. Eitel, of Minneapolis, who has been in Europe visiting the hospitals for several months, will return to his practice about Jan. 10th.

Dr. F. Huxley, who has been house physician for two years in the School for the Feeble Minded, at Faribault, Minn., has begun general practice in that city.

The attorney general of Minnesota has decided that osteopathic colleges are not entitled to a share of unclaimed corpses, which the state apportions to the medical institutions.

Dr. Paul S. Halloran, of Owatonna, Minn., a recent graduate in medicine, has been appointed an assistant surgeon in the army, and assigned to duty in the medical school at Washington, D. C.

Dr. Robert Hall Babcock, of Chicago, the distinguished specialist in physicial diagnosis, was called to Minneapolis several days ago for consultation. Dr. Babcock has been totally blind since the age of 13.

Are doctors good guessers? Dr. Hoorn, of Red Wing, Minn., Dr. O'Brien, of Wahpeton, N. D., and Dr. Riggs, of Andover, S. D., got premiums in the Tribune "dot contest," being numbered 109, 344, and 403, respectively, among the 461 successful contestants.

Dr. J. E. Moore, of Minneapolis, is the president-elect of the Western Surgical and Gynecological Association, this honor having been conferred upon him at the annual meeting of the association in Chicago last month. The association will meet this year in St. Joseph, Mo.

Dr. Dan. G. Beebe, assistant sugeon in the U. S. navy, has been visiting friends in Minneapolis for the past few weeks. Dr. Beebe has served on the Buffalo, the Boston and the gunboat Marietta. He has resigned from the service and will return to Manilla for further travel and inspection of the Philippine Islands.

The Minnesota Valley Medical Society elected the following officers for the current year: President, Dr. W. J. Mayo, Rochester; first vice-president, Dr. F. A. Dodge, Le Sueur; second vice-president, Dr. J. W. McCarthy, Madelia; third vice-president, Dr. E. W. Benham, Amboy; secretary, Dr. E. W. Steel, Mankato; treasurer, Dr. F. G. Merrell, St. Peter.

NORTHWESTERN LANCET

A Semimonthly Medical Journal

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THE STEREOSCOPIC PHOTOGRAPH

THE BENEFICIAL EFFECT ON THE EYES FROM THE USE OF THE STEREOSCOPE

By A. Edward Davis, A. M., M. D.

Professor of Diseases of the Eye in the New York Post-Graduate Medical School and Hospital; Assistant Surgeon at the Manhattan Eye and Ear Hospital.

NEW YORK CITY

SECOND PAPER

So much for binocular vision and its theories of production. We will now consider the practical uses of the stereoscope in medicine.

MEDICINE

The most important use of the stereoscope in the practice of medicine, is that in connection with squint or "cross-eye." In such eyes the faculty of single binocular vision is in abeyance, due to the fact that the eyes are not used together, and also to weak or poor vision which usually obtains in the squinting eye. Even in cases where there is not a manifest squint but only weak muscles, and in cases where the vision is much weaker in one eye than the other from whatever cause—an error of refraction, opacities of the media, etc.,—where binocular vision is difficult, the stereoscope is of the greatest help in strengthening such eyes and maintaining single vision with the two eyes at once. Again, in case of squint where the eyes have been operated upon but not quite straightened, the stereoscope is of much service in completing the cure and developing true binocular vision.

Although, as stated, in the historical part of this paper, the stereoscope was invented in 1833 by Wheatstone, and its use explained more or less fully by him, Brewster, Carpenter and others, it was not taken in a serious way at all by the public who considered it simply as a toy for amusement. The medical profession held the instrument in about the same esteem as did the public at large. The laity, or many of them at least, got the mistaken idea that the stereoscope was often injurious to the eyes; especially was this so if the eyes became tired after using the instrument for a little while. They did not stop to consider that the fault might be in their own eyes, due to a lack of proper adjustment of the focus in one or both eyes, or to maladjustment in the movement of the eyes, or to faulty direction of them.

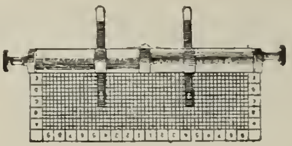
It was not until Javal, of Paris, began to investigate the causes and cure of squint, in 1871, and brought the stereoscope to his aid in the correction of this deformity, and the restoration of true binocular single vision in these cases, that the stereoscope was appreciated for its true worth in medicine. Von Graefe also was one of the earliest investigators to appreciate the value of the stereoscope in such cases, and he regarded stereoscopic vision as the crucial test in a successful cure of squint.

In squint, but one eye is used at a time, the other being turned inward towards the nose, convergent; or outward towards the temple, divergent, respectively as the case may be. At times the eyes may also deviate in a vertical direction. Inasmuch as the condition in squint is that one eye only is brought into use at a time, binocular vision is of course impossible, since binocular vision necessarily means the use of both eyes at once.

Furthermore, in almost every case of squint there is some error of refraction in one or both eyes, with the error usually more pronounced in the squinting eye. In convergent squint we have, as a rule, far-sight or hypermetropia present, with astigmatism often also as a complication. In divergent squint where the eyes turn toward the temple, near-sightedness or myopia is usually present, and astigmatism also in addition. It is altogether essential therefore in the treatment of squint, first to fit the patient with the correct glasses. In so doing the focus in each eye is made more nearly equal, the images on each retina made brighter and more nearly equal, and the strain taken off of the focussing muscle.

Three steps are necessary in bringing about single binocular vision: first, a simultaneous perception of the images of the object in the two eyes; second, fusion of these two images into one; third, perception of relief, that is true form perception. For all three purposes the stereoscope is of the greatest service. Special stereoscopes have been made for training the eyes afflicted with squint, also special pictures or views made to be used in such cases. Javal, George J. Bull, Prestly Smith, R. H. Derby, C. Worth and several others have invented special stereoscopes. Some of these stereoscopes are so constructed that the distance between the eye pieces can be easily changed so as to fit the eyes of any observer; also in some of them the eye pieces can be set to suit the varying degrees of squint; and in some of them the illumination on the two sides can be varied. Javal and Bull of Paris have invented a stereoscope which has as many as five movements, while the Derby stereoscope is so arranged that the half views on the card, by a simple screw arrangement, can be moved both in a lateral and vertical direction.

In regard to the distance between the eye-pieces, it is essential that it should correspond closely with the distance between the center of the pupils of the eyes. If the eye-pieces of the stereoscope are wider apart than the eyes, the rays of light pass nearer the edges of the refracting prisms and are more strongly refracted than when passing through the center of them, with the result that the images of the pictures on the card are too widely displaced; so that the eyes cannot bring them back to their place of union and fuse them into one, half-way between the two pictures on the slide. Or, if the eyes do succeed in fusing the pictures it is by a great strain on the convergence, and this is painful and besides injurious to the eyes. Again, if the eye pieces of the stereoscope are closer together than the eyes, the two pictures are not displaced or separated widely enough; and again the fusion of the two pictures into one at their proper place of union half-way between the two pictures on the card, is made difficult or impossible. The average distance between the pupillary centers in the adult is two and one-quarter inches, and this should be the distance between the eye-pieces of the stereoscope where they are stationary. For ordinary stereoscopic views this is accurate enough, but for special practice a changeable distance between the eye-pieces is desirable.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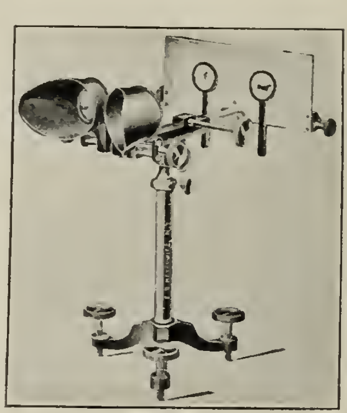
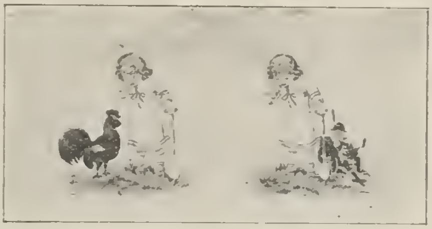

Derby Stereoscope

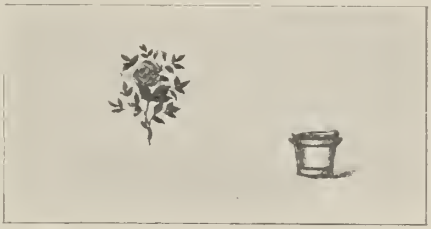
The object in having the stereoscope so arranged that the illumination of the two sides can be varied is to make the images in the two eyes more equal in brightness and definition, when the eyes themselves are unequal in visual perception. For instance, if one eye has poor vision and consequently dim images, while the other eye has good vision and bright images, it is difficult to fuse these two images of different intensity into one and have single vision. Whereas, if by dimming the illumination in front of the better eye until its image is more nearly equal to that in the poor one, it is much easier to fuse these images which are more nearly alike.

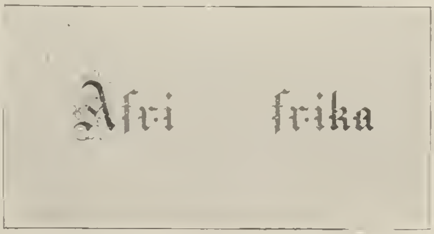
Concerning the change in the angle of the eye-piece, it is desirable to have such an arrangement where the eye squints and the images for the two eyes are thrown wide apart and cannot be fused unaided. However, if the angle of the eye-piece can be changed so as to bring the images of the object on the macula of each eye at once, often the images are fused as one, and afterwards the eye-pieces can be gradually turned back to a correct position, as for eyes that are straight, encouraging the eyes to turn with them. With much practice single binocular vision is greatly stimulated in this way.

Sometimes instead of having the eye-pieces change their direction, the card with the double picture on it is divided vertically in the middle and so arranged that the two pictures can be approached nearer to and further apart than for normal eyes, and in this way fusion of the two images can be effected. As a rule the first card we place in front of the eyes in squint cases is one with simply a round black dot on each side of the card. The card is a sliding one or the angle of the eye-piece of the stereoscope must be one that can be changed, so that the dot can be placed in the visual line of each eye. If the patient succeeds in fusing these simple round dots, especially after varying the distance between them slightly, we then substitute more varied figures, as truncated cones or pyramids and let him fuse these. To be sure that the patient is really fusing the images of the two eyes and not suppressing the image in one eye, it is necessary to add small distinguishing marks to the right and left picture respectively. If the patient sees the object as one, with both distinguishing marks present, we know he is fusing the images; but if with only one of the distinguishing marks present, then we know he has suppressed one of the images.

Javal has made some very ingenious stereoscopic views of this order for the purpose of preventing the suppression of the image in the weaker eye. Kroll, Green, Dahlfeld and others have also made cards for this purpose. Dr. Kroll has made a series of pictures, a few of which are here reproduced, in which the pictures on the two sides of the card are made homonymous or alike, as those of a little girl, the images of which when fused give one girl. In other views the pictures are heteronymous or dissimilar, as that of a rose-bush on one side of the card and a flower pot on the other side, so that when the eyes are properly directed the rosebush should be in the pot.



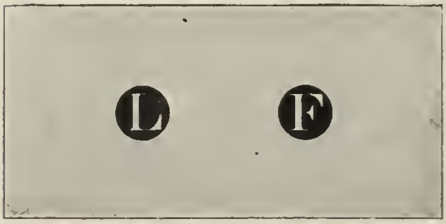




In the homonymous pictures he has identified the main picture by smaller ones at their side, as with a fowl or a toy, in order that in cases of diplopia, or double sight, we could tell if the diplopia is crossed or homonymous. In this way it can be ascertained if the eyes diverge or converge while looking into the stereoscope. Where the images are so far apart that they cannot be fused, Kroll has a card, of which mention has already been made, in which the pictures on the two sides of the stereoscopic card can be made to approach towards or separate from each other, and in this way fusion is often accomplished. Derby's movable views are used to accomplish the same purpose.

Another special stereoscopic card (included in

Javal series) is a slide with the letter L on one side of it (left), and the letter F on the other side (right). When looked at in the stereoscope, if the eyes are parallel, the letter E should be formed by their fusion. This card is also a good test to catch impostors with, those who claim to be blind in one eye. For instance, if such persons should look into the stereoscope at this card and say he saw the letter E, we would know at once he was an impostor, because if blind in one eye he would not see the letter E, which could be accomplished only by fusing the letters L and F, while if blind in either eye the letter L or F would be seen accordingly as the right or left eye is blind. When these letters L and F are fused and form the letter E, it is a sure sign that single binocular vision is present. This card, therefore, is one of the simplest and best of the stereoscopic views for medical purposes. There are many of these special cards, but lack of space forbids their mention even.



After establishing binocular vision in squint cases, the next step is to give the patient the idea or sensation of relief or true form of perception. It takes months sometimes to bring this about. The special views of Javal, Kroll and Green are excellent for this purpose, but the photographic stereoscopic views, especially the views taken of objects at very close range, as of the "Lilies," and the "Child and Cat," etc., as shown here by illustration, are excellent for this purpose. Besides, there is a wide variety to pick from, and in this way the interest of the patient is kept up, and the necessary practice is taken which might otherwise be, and often is, neglected.

Many people use but one eye at a time and are totally unaware of the fact, thinking that they are using both eyes together. They see but do not see perfectly. A striking example of this occurred in my practice this past winter; a young minister, thirty years of age, had a cross-eye which was operated on when he was eight years of age and almost straightened, but not quite so. The eye was so nearly straightened that no one could ordinarily detect the cast in it; and he himself thought he was using his eyes together until I put the stereoscope before them, when he discovered he saw double. After one week's practice with the stereoscope he saw objects singly, perceiving for the first time the correct form of objects in their third dimension distinctly. It is unnecessary to say he was highly gratified with the result. While this is a striking case of its kind it is not an uncommon one.

Another use for the stereoscope in medicine is for the illustration of pathological specimens.

By means of the stereoscope these specimens can be made to stand out in relief, and in this way a much better idea of their nature and true form can be obtained. An instrument called the Verascope is used for this purpose also, which is in fact a stereoscope in which the views or specimens are seen by transmitted light rather than by reflected light, as in the usual stereoscope.

In prescribing stereoscopic exercises in cases of squint, care should be taken that the patient gets a suitable stereoscope. The special stereoscopes in which the distance between the eyepieces can be changed, and the angle varied to suit different degrees of squint, are the best. Unfortunately, because of their high price, they are many times beyond the reach of patients who need them most. Where the special stereoscope cannot be had, the ordinary stereoscope with the sliding views, in which the distance between the two pictures on the stereoscopic view can be varied, is the next best thing.

For ordinary stereoscopic exercises, in cases where there is no actual squint, the ordinary sterescope, in which both the special views and the ordinary views can be used, answers all purposes.

In conclusion, it is important to notice that, as medical practioners, we have in the stereoscope and its accompanying views, most valuable auxiliaries. If we were called upon to prescribe for our patients an optical exercise which was irksome or mechanical merely, or even one that was devoid of any special interest to them, they would not be inclined to use it with the persistency and faithfulness the conditions might require, and hence we might despair of effecting a cure, at least in a large number of instances. But the case is far different, since in the stereoscope and views, we have one of the most fascinating and instructive methods conceivable,—a method of representation that is marvelously realistic, since it shows objects life size and in three dimensions. Whatever the patient's intellectual bent, be it history, art, travel or science, we have here a means of gratifying it, since special sets of stereoscopic photographs have been prepared representing all the leading countries of the world, and an interesting guide book accompanies each set which furnishes a vast deal of valuable information in regard to the views. To be asked to view such remarkable representations of famous persons and places cannot fail to be a source of pleasure as well as of profit to our patients.

You may not be aware of the fact that the stereoscope is used to teach history, physical geography and the sciences. For instance, classes in history are given certain subjects, city or country, to read up on; and at the same time, stereoscopic views representing historical places, as temples, palaces, courts, cities, etc., of such countries, and of distinguished persons who have helped to make its history, together with different types of its population and its animal life, are placed before them. So in the study of physical geography, the different formations of the land's surface and strata can be shown better by means of stereoscopic views than in any other way, except by actual visits and direct inspection. The stereoscope is also used to advantage in the study of natural history, in architecture, in engineering, and in sculpture; specimen stereoscopic views being given to the students to study in connection with the reading matter. In this way the class-room work is rendered wonderfully interesting, and the subject becomes a live one, a present reality. The government uses stereoscopic photographs for purposes of instruction in the military academy at West Point.

What is being done so largely elsewhere, should be utilized, even more generally than heretofore, in the medical colleges of our land; for there is no better way of giving the students a knowledge of anatomical and pathological conditions, apart from the realities themselves, than by the realistic representations which are afforded us in the use of the stereograph. A library of medical stereographs should be in every medical college.

I have simply attempted to give an outline of a subject which in itself is so vast and inexhaustible that to do more, would require a large volume. If I have intimated, even in a very vague and general way, the boundless possibilities that are wrapped up in the stereoscope and stereograph, and especially if I have brought to your notice, as physicians, a method that has proved invaluable in my own practice, and shall in any measure be instrumental in bringing you to utilize the same, the purpose of this paper will have been accomplished.

THE DIAGNOSIS OF EXTRA-UTERINE PREGNANCY*

By J. E. Moore, M. D.

Professor of Clinical Surgery, University of Minnesota

MINNEAPOLIS

My experience with this dreaded condition began over twenty years ago, when I was called one evening to see a young woman who was said to be suffering from cramps in the bowels. I found her quite pale, and perspiring quite freely. She complained of severe burning pain in the lower part of the abdomen, and said that she thought her evening meal must have caused the trouble. The question of pregnancy was not considered, because she was still nursing a baby. I gave her a little stimulant and a hypodermic of morphia. In the course of half an hour she sat up in bed to quiet her child, and expressed herself as feeling so much better that I went home. At three o'clock in the morning I was hastily summoned, and found her pale as death, and gasping for breath. My diagnosis then was internal hemorrhage from causes unknown. She died before morning. I was permitted to make an opening in the abdomen large enough to demonstrate that her abdomen was full of blood.

I thought for many years that this woman had discovered she was pregnant, and that, in using some sharp instrument to bring about a miscarriage, she had punctured a blood-vessel, but since we have become familiar with extra-uterine pregnancy I have been satisfied that hers was a case of this kind. Our present knowledge of this condition began with Tait's paper published in the British Medical Journal, Oct., 1887, in which he reported thirty-five operations for ruptured extra-uterine pregnancies, with but two deaths.

The diagnosis of this condition is of special interest to the family practitioner, because he is the first one called, and upon him rests the responsibility of recognizing the condition early enough to advise the only treatment that holds out any prospect of relief, viz., early and prompt operation. Twenty years ago one was excusable for not making a diagnosis, because the condition was not understood, but at the present time every practitioner should be familiar with the symptoms, and should remember that he is liable to meet with a case any day. In Minneapolis the medical men have grasped the situation, and are constantly on the lookout for these cases. We are beginning to learn that the condition is quite a common one. I am called upon frequently to operate, and other surgeons are having the same experience, so that it is evident that there are a goodly number of cases in our city each year. Those of you who are country practitioners are not so liable to meet with this condition as the city practitioner is, because criminal abortion and gonorrheal infections are not so common among country women, but a sufficient number of cases occur in women who have never had a miscarriage or a gonorrheal infection to make it quite possible for you to meet with them.

It is impossible to write intelligently on this subject without touching upon points set down in every modern text-book, but a review will do us no harm, and, after describing the methods that have been most helpful to me, I hope to profit by the experience of those who take part in the discussion.

Unfortunately the doctor is not called, in most cases, until rupture or tubal abortion has taken place, and the woman is bleeding internally. Not very long ago it was pretty generally believed that a diagnosis could not be made before rupture, but cases are being constantly reported now in which the diagnosis has been made, and an operation performed, before rupture. I have had this experience a few times myself. Not long ago I received a reprint in which the author gave a detailed description of ten cases occurring within a comparatively short time, and in which he had made the diagnosis and had operated before rupture had taken place. His experience was certainly an exceptional one. It should be borne in mind that an extra-uterine pregnancy is more likely to occur in a woman who has been married a long time without conceiving, or who has not borne a child for a long time. The first month or six weeks of an extra-uterine pregnancy may differ in no way from a normal pregnancy, and the alarming symptoms due to rupture may come like a clap of thunder from a clear sky. As a rule, however, there are indications during this time that something is wrong. One menstruation may or may not have been missed; and there is apt to be a sharp colicky pain in the lower abdomen, more marked on one side, and accompanied by syncope. The patient may speedily recover from one attack, which is soon followed by another. The pain is probably due to contraction of the tube. Accompanying this pain there is apt to be a discharge of dark, clotted blood from the uterus, which comes and goes at very irregular intervals.

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*Read before the Minnesota Valley Medical Society, December 3, 1901.

When the patient suspects pregnancy at all she fears that miscarriage is about to take place. Every patient coming to the physician with this train of symptoms should be subjected to the most painstaking and careful examination imaginable. The object of this paper is to urge the necessity of this examination in every case where the symptoms suggest to the physician the possibility of tubal pregnancy, and to give in detail the method of making it.

An office examination will seldom suffice. The lower bowel should be emptied by an enema, and the patient clothed in a night-dress and placed upon her back with the knees drawn up. She should be upon a table or a bed high enough to allow the examiner to stand or sit in a comfortable position. In extra-uterine pregnancy the uterus is enlarged, and the cervix softened just as in normal pregnancy. The pelvis is very tender, especially on the side where the pain is located. Careful search should be made by bimanual examination for a pulsating tumor. The manipulations should be gentle, because it is possible to cause a rupture by heavy pressure, and much more information is to be gained by gentle manipulation. The mass will be found at one side of or behind the uterus, and the uterus will be crowded out of place accordingly. When a tender, oval and distinctly pulsating mass is found, this will be sufficient evidence upon which to base a tentative diagnosis of extra-uterine pregnancy. Unfortunately, however, the mass cannot be so clearly outlined in the majority of cases. It is apt to be boggy and indefinitely outlined, and pulsation may be absent or indistinct.

There is no other one manipulation that has been so helpful to me as a careful examination through the rectum. It will often be found necessary to administer an anesthetic to get the full benefit from this method, but we should never hesitate to do this when in doubt. By passing two or more fingers well up into the bowel, and crowding the uterus down with the other hand over the abdomen, the cul-de-sac and the broad ligaments can be examined much more satisfactorily than through the vagina. I cannot recommend this method too highly to you.

When a positive diagnosis of extra-uterine pregnancy is made before rupture, or when an experienced examiner strongly suspects this condition, an opening should be made through the vagina, to settle the matter definitely. In skilled hands this operation is practically without a mortality rate, and when the diagnosis is confirmed the distended tube can be safely removed through the vaginal opening. If no pregnancy is found, no harm is done and all anxiety is relieved. A very strong argument in favor of the vaginal exploration is that the patient will rarely offer serious objection to it, where she would often refuse an exploratory opening of the abdomen.

I have dwelt thus far upon the diagnosis of tubal pregnancy before rupture because it is along this line that we must make our progress. If we all recognized the fact that tubal pregnancy is really a common condition, and if we will follow out early and systematic examinations, including vaginal exploratory incisions when necessary, we will often make the diagnosis of this extremely dangerous condition before rupture, and will be enabled to save many valuable lives, and to bring honor to our beloved profession.

While my object is primarily to discuss the diagnosis before rupture, a paper upon this subject without reference to diagnosis after rupture would be very incomplete. The symptoms of a ruptured tubal pregnancy are those of an acute abdominal hemorrhage, and a very large percentage of intra-abdominal hemorrhages is due to extra-uterine pregnancy.

A fainting patient, with cold, white skin, feeble pulse, and burning pain in the lower abdomen, should make every physician think of extra-uterine pregnancy. If upon inquiry it is found that the patient has missed one menstrual period, or has been losing blood from the vagina for some little time, and if upon examination the cervix is soft and the body of the uterus is enlarged and pushed out of place by a boggy mass in the pelvis, the picture is complete, and no one should hesitate to make a positive diagnosis, and to urge immediate operation.

After rupture has taken place, the abdomen should be opened as quickly as possible. The vaginal route is unsafe under these conditions. It should be remembered that the patient is almost certainly bleeding to death, and that the indication is to reach the bleeding point in the surest and speediest manner possible. Unnecessary delay under these circumstances is criminal.

Owing to a remarkable coincidence I am able to illustrate my paper, so to speak, with a report of a case operated upon day before yesterday from which I show you this specimen. I had my paper already written when I was called into a neighboring state to do some operating, and slipped the paper in my pocket to look over during the railway journey. When I arrived at my destination I found that a doctor, who had heard that I was to be in the place, had brought his wife about thirty miles on the train to see me. The patient was a seemingly healthy woman, twenty-seven years of age, who had been married but four months. Six weeks before consulting me she had menstruated, but not as many days as is her custom. Three weeks ago she began to have sharp, burning pain in the pelvis and lower abdomen, which finally located itself low down on the left side. At the same time she began to have a discharge of dark, clotted blood, alternating with a discharge that seemed to her like a mixture of blood and water. On examination I found that she had no temperature; that a bloody discharge was coming from the vagina; that the cervix was soft like that of a pregnant uterus. The uterus was perceptibly enlarged and softened. To the left of the uterus I found a very tender, pulsating spot. A very slight thickening could be made out at this point. I told her and her husband, who was a doctor, and her attending physician—Dr. Campbell, of Watertown, S. D.—that I believed she had an extra-uterine pregnancy, and advised that she be taken to the hospital at once and prepared for an exploratory opening through the vagina. This was about nine o'clock in the evening. She was taken to the hospital at once, and prepared for operation. The following morning at ten o'clock an anesthetic was administered. Under anesthesia all of the former symptoms were verified. A distinct pulsation could be felt in the left broad ligament. Through the rectum a small subperitoneal fibroid tumor could be felt on the posterior wall of the uterus, and a small pulsating mass could be easily made out in the left broad ligament. I made an incision back of the uterus and removed this tube, which, as you can see, bears evidence of having been impregnated, although the specimen was somewhat injured in removal. I removed the fibroid from the posterior wall of the uterus and another one from the anterior wall of the uterus which was located subperitoneally well down toward the bladder. It was comparatively easy to remove this last one, however, by dragging the fundus out through the opening into the vagina. All of these specimens I present for your inspection. So far as I know only one of the generally accepted causes of tubal pregnancy obtains in this case, and that is that the woman was married later in life than the average.

I have since learned that the patient made an uninterrupted recovery.

SYMPTOMS OF RHEUMATISM IN CHILDREN

The most impressive fact to be noted in connection with rheumatism in children is the readiness with which it involves the endocardium. This membrane is undoubtedly more susceptible in childhood than in adult life to the poison that attacks the serous and fibrous tissues about the joints; so that endocarditis as a manifestation of rheumatism becomes nearly twice as common in children as in adults. Often the joint manifestations are so slight that they are overlooked, and the symptoms produced by a valvular lesion of the heart are the first that attract notice. I have not introduced in the above series any cases of heart disease that did not have a clear antecedent history of articular rheumatism; but no doubt a considerable proportion of other cases of heart disease in children for which no cause can be found are in reality produced by a rheumatic attack so slight that it escaped notice.—American Medicine.

HAY FEVER AND ASTHMA
A PERMANENT CURE BY MEANS OF NASAL SURGERY*

By Floyd S. Muckey, M. D., C. M.

MINNEAPOLIS

Hay fever and asthma are reflex nervous diseases. The pathological conditions involved in them are located mainly in the nose, and consist of hypertrophy in the form of thickened mucous membrane and exostoses, deflection of the septum and tumors. The *pressure* caused by these abnormal conditions produces an irritable state of certain terminal filaments of the nasal nerves, and this irritation is reflected, by means of communicating branches, to various other nerves and through them to other organs of the body. The first and most important of these reflexes is that to other filaments of the nasal nerve itself, and this gives us what are known as "the sensitive spots or areas" in the nose. The nasal nerve is a branch of the ophthalmic, the sensory nerve of the eye, and through this connection we get the congestion and itching of the conjunctivæ and lachrymation. Through Meckel's ganglion we get a connection with the palatine and pharyngeal nerves and that distressing symptom, the itching of the soft palate and pharynx. A communicating branch to the phrenic nerve gives the spasmodic contraction of the diaphragm and associated muscles which we call sneezing and coughing; while a branch to the pneumogastric gives us the spasmodic contraction of the bronchial muscles, known as asthma. These are the principal reflexes involved in this most distressing malady.

I would like, at the outset, to emphasize one point, and that is, that *it is the pressure in the nose which is the primary cause of all the disagreeable manifestations of the various reflexes enumerated.*

ETIOLOGY

It is conceded by most authorities on hay fever and asthma that there are three links in the chain of their causation: First, a certain atonic state of the nerve centers, which renders them unstable, and thus allows them readily to transmit the irritation; second, the presence in the air of various forms of dust particles, especially the pollen of flowers; third, the nasal disease. The complete removal of any one of these elements will render the other two inert as far as the hay fever and asthma are concerned.

SYMPTOMS

The symptoms of hay fever and asthma are too well known to require any detailed description. The sneezing, itching, and congestion of the nose, eyes, and pharynx, and the difficult breathing, form a picture which is familiar to all.

DIAGNOSIS

The symptoms enumerated above, together with the presence in the nose of some abnormal condition,—such as hypertrophied tissues, deflection of the septum, nasal tumors, etc.,—render the diagnosis very easy.

TREATMENT

If the causes of this disease have been correctly stated, and no one who has had any extended experience with it will attempt to contradict it, the treatment becomes very plain. It must consist in the removal of at least one of the three elements of causation mentioned above. The nervous element is so obscure and indefinite that it is impossible to treat the disease with any degree of certainty from this standpoint. As to the second element, the dust, this is present in the air, and the only way to avoid it is to remove the patient from the locality in which his particular irritant, or irritants, is present. These attempts fill the so-called "Hay Fever Resorts," where the patient is more or less free from the disease. This, however, is an expensive operation, as the patient is only partially free from the disease, and while he remains in this locality. Moreover, traveling expenses, hotel bills, and loss of time from business soon make up a very large bill of expense, while the relief is only temporary. The only hope of a permanent cure, therefore, lies in the removal of the nasal disease. If this can be properly done the result is a speedy and permanent cure.

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*Read before the Minnesota Valley Medical Society, December 6, 1901.

Keeping in mind the fact that *pressure in the nose is the primary cause of all the difficulty, any rational treatment must be directed towards the relief of this.* The pressure being caused by hypertrophied mucous membrane, exostoses, deflected septum or tumors, the treatment consists in the removal of these abnormal conditions. Exostoses should be removed with the saw, and deflection of the septum corrected by an appropriate operation. Hypertrophy of the mucous membrane and tumors should be removed by the use of the cold-wire snare. All of this can be carried out by a skilled operator without any pain or inconvenience on the part of the patient, without any danger from hemorrhage and in a comparatively short space of time.

"But," the reader will say, "there is nothing new or startling in this line of treatment. It is nothing but what common sense should dictate to anyone." The latter statement is true. The novelty, as far as my experience goes, lies in the statement that *pressure in the nose is the primary cause of the disease,* and also *in the recognition and manner of removal of the hypertrophied mucous membrane.* Most rhinologists use the galvano cautery to reduce these growths. I cannot too strongly condemn the use of this agent in the nose. In the first place much of the hypertrophy is so located in the nares that it cannot be reached with the cautery-knife, and hence a cure cannot be expected from its use. On the contrary, hypertrophy in any part of the nose can be reached and removed by the cold-wire snare. When the cautery is applied to an hypertrophy a certain amount of tissue is destroyed by the burning. *This tissue is not removed at the time of the operation, but remains in the nose until by the process of sloughing it is thrown off.* The reaction following such an operation is very intense, causing a great deal of swelling and inflammation and consequent distress to the patient for a period varying from a week to ten days. This is a most unsurgical procedure, and would not be countenanced by surgeons in any other line of work. With the snare the case is quite different. *The diseased tissue is removed at the time of the operation. There is no sloughing and very little reaction, and the relief is immediate.* Again, the application of the cautery destroys a certain amount of tissue, but the heat from the red-hot knife has been sufficient to destroy the mucous glands in a certain extent of membrane surrounding the slough, but not the membrane itself. The result is that when the wound has finally healed there is an area of membrane which is devoid of mucous glands. This condition is termed atrophic rhinitis, and is the worst form of catarrhal disease known. A sufficient amount of burning to cure the hay fever and asthma, were it possible to reach all these growths with the cautery-knife, would give a well-developed case of atrophic rhinitis an incurable disease, because these mucous glands cannot be replaced. We are then simply exchanging a curable for an incurable disease, which must be admitted by all to be a very bad bargain.

On the other hand the wire of the snare being cold no glands are destroyed except those removed with the growth, and these are usually diseased. The mucous membrane remains healthy up to the edges of the wound, and experience has taught me that the contraction of the tissues brings these edges together, so that six months after the operation it is impossible to tell where the growth has been removed, and the nose is as healthy as it was before the disease developed. The use of the cautery causes so much swelling and pressure that the raw surface often grows to the opposite side of the nose, giving fibrous bands across it. I have seen one side of the nose entirely closed from this cause. I have never seen any such result follow the use of the snare. Another strong argument in favor of the use of the snare is the rapidity with which the work can be done, and results obtained. Much more tissue can be removed at one operation with the snare than with the cautery, and therefore the time of the whole treatment is greatly lessened. Hypertrophied tissue is removed and pressure relieved at each sitting, and as the reflexes are dependent upon this pressure they disappear with it. The so-called "sensitive spots or areas," which were considered by Sajous, McKenzie, Daly, Roe, and others, to be a primary cause of the disease, are simply one of the reflexes caused by the pressure, and they disappear when this is relieved, and therefore need no special treatment.

A word of caution is here necessary regarding the use of the cold-wire snare. Much harm may be done to the nasal structures by its use in the hands of the incompetent or careless operator. There must be no "catch-as-catch-can" operations with this instrument. The growth must first be definitely mapped out, and the wire bent to fit it so that nothing but the diseased tissue is engaged. *Healthy mucous membrane should never be removed.* Every movement of the wire should be guided by the sense of sight, and the operator must be extremely careful that nothing but diseased tissue is cut out. I have seen large portions of the turbinated bones removed by this instrument, which I think is a great mistake, and ought to be considered a criminal procedure. I have never yet seen a case where I deemed it necessary to remove any portion of the turbinated bones. The nostrils can always be made perfectly clear by the removal of the hypertrophied mucous membrane. This is all that is necessary. As to the recognition of these growths, I believe that the failure to cure hay fever and asthma may be attributed to the fact that the rhinologist has not properly discriminated between healthy and diseased mucous membrane. I am free to confess that my failures in the past have been due to this cause.

There is one objection which every successful investigator in any field is sure to meet, which will deter many from taking advantage of opportunities which otherwise would be of great benefit to them. It is this, that other eminent investigators have been working along the same lines, and have failed or have been only partially successful, and, therefore, the one who announces a complete success must be an impostor. This criticism has been made in my case, although the ink is scarcely dry upon the paper in which the announcement was made. It seems to me that this is a very weak argument. If "the eminent investigators have failed, except in a few instances," this is their misfortune, and should not count against the one who is successful. Again, why should "the eminent investigator" suceed in one case and fail in another? If he can cure one, why can he not cure all? Are the causes so different in any two cases that the procedure which will relieve one will not relieve the others? I for one cannot think so. If this be true then the whole science of medicine and surgery is chaos, and treatment is a mere matter of guesswork. There must be general principles which control the development and course of every disease, and these principles point out with absolute certainly the course which must be followed to cure that disease. The principle which underlies hay fever and asthma is pressure on nerve filaments, and the treatment to be rational must be directed to the relief of this. I too have been in the same predicament as the eminent investigator. I have had the experience of curing some and failing in many. But I asked myself the above questions, and I then went to work to answer them. I examined very carefully those cases in which I had been successful. I did the same with those in which I had failed. I then examined many cases which had always been normal, and compared notes. I found in the cases where I had failed pathological conditions in the form of hypertrophied mucous membrane which I had not before recognized. I examined cases which had been unsuccessfully treated by others, and I found the same pathological conditions present. I devised a method of removing these growths with the snare, and success came. I have treated successfully several cases in which I had previously failed, thus confirming my hypothesis that pressure on the terminal filaments of the nasal nerve is the primary cause of the disease, and that the removal of this pressure will cure it. I have treated successfully some cases in which the eminent investigator has failed showing that he did not recognize these pathological conditions, or at least he did not remove them. Finally, I have found these pathological states in every case of asthma and hay fever which I have examined, and where I have had an opportunity to completely remove them a cure has resulted. From this experience it seems to me that I am justified in the claim that every case can be permanently cured. This is simply the application of the scientific method to the investigation and treatment of disease, and it is the only method which will give results in any field. In hay fever this thickening is usually located on the upper and anterior part of the middle turbinated bone, and the pressure is thus made against the upper and front part of the nasal septum. The nasal passages are very narrow in this portion, and therefore a slight thickening here will cause pressure, and the disease is the result. The slight hypertrophy is very liable to be overlooked, and this accounts for the fact that it is not recognized by the rhinologist. In cough and asthma the growths are usually found on the posterior part of the lower turbinated bone, and the pressure is exerted on the lower and posterior part of the nasal septum. I have found some exceptions to these general rules, but have never seen a case of hay fever in which the hypertrophy of the middle turbinate has not been present.

I will now report a few cases which will serve to illustrate these remarks.

Dr. K—— came to me suffering from a moderately severe attack of hay fever. There was present the itching and congestion of the nose and eyes, and lachrymation. Examination revealed a thickening of the mucous membrane covering the upper and anterior portion of the left middle turbinated bone. This was removed, and the result was almost immediate relief from the distressing symptoms. This case is unique from the fact that it took but a single operation to effect a cure, and this, too, *during the paroxysm.*

Mrs. Z——, a German woman, æt. about 45 years, had suffered from hay fever and asthma for fifteen years. She was not only troubled during the summer months, but dust at any time of year would cause a paroxysm of sneezing and asthma. Dust from sweeping or wheat dust was especially obnoxious to her. Examination revealed hypertrophy of the mucous membrane covering both the middle and lower turbinated bones. It took six operations to remove this and she reported afterwards that she could sweep and go out into the granary and help clean and put up wheat (she was accustomed to out-door work) without the slightest difficulty. Five years ago I should have pronounced this nose perfectly healthy.

E. S——, a boy, æt. 14 years, had suffered from cough and asthma since the age of six, and had not been free from it at any time of the year for this period. Examination revealed marked hypertrophy of both lower and middle turbinated bones, and adenoid vegetations in the vault of the pharnyx. After four operations the asthma stopped, and after the sixth the cough; and this young lad, who had not drawn a free breath for eight years and who looked like a little dried up old man, began again to breathe as nature intended he should. With proper breathing exercises to develop the chest, which had become greatly deformed from insufficient expansion, he will become a useful member of society.

Another patient was referred to me, who complained of a persistent spasmodic cough which had lasted for about a month. The irritation seemed to her to be in the larynx and upper part of the trachea. Examination of the throat revealed a highly congested condition of pharynx and larynx, but this was evidently the result of the continued cough. Upon questioning, the patient denied the existence of any nasal difficulty. Examination, however, revealed marked hypertrophy of the lower turbinated bone with pressure against the septum. A single operation here dispelled the cough, and there has been no return.

Miss S——, a school teacher, æt. about 25 years, was referred to me for asthma. Examination revealed the presence of polypi in the posterior part of the nose. An operation on each side served to clear the nose and relieve the pressure, and at the end of the second operation, befor she left the office, the asthma disappeared, and has not since returned. And so I might go on and report scores of cases, but these are sufficient to illustrate my point. The relation of cause and effect is too clearly manifested here to admit of any doubt. The evidence is clear and must convince those who will think. I am firmly convinced that failure in any case is due to the inability of the rhinologist to recognize and remove the pathological conditions in the nose. I believe that any practitioner who states that hay fever and asthma cannot be cured simply admits his own inability to properly treat nasal disease. I am willing to risk my professional reputation upon this test, and will allow any one who chooses to select the case.

Another point which I wish to emphasize here, is gentleness on the part of the rhinologist in handling these cases. The nose is a very sensitive organ and needs to be handled very carefully. With the use of cocaine and adrenalin, there should be no pain to the patient, and no danger from hemorrhage if the manipulations are properly performed. The man who causes pain or hemorrhage is not performing his work in the best possible manner.

Finally, the removal of these growths is important if we leave the question of hay fever and asthma out of consideration altogether. Their presence in the nose interferes with the proper circulation of the air through these passages, and enough is not taken into the lungs to properly expand them or to aërate the blood. The chronic inflammation that these growths keep up in the nose, is almost sure to extend to the Eustachian tube, and thence to the middle ear, and cause trouble here. It may extend also to the pharynx, larynx, trachea and bronchial tubes giving, respectively, pharyngitis, laryngitis, trachitis, and bronchitis; and I think in many cases it is one of the predisposing causes of phthisis. If we are rational human beings, no matter from what standpoint we consider these conditions, the only conclusion we can come to is that they must be removed. This must be done with three things in view: First, the least possible damage to the nasal structures; second, the shortest possible time; third, the least possible pain and inconvenience on the part of the patient. All of these can be accomplished by the proper use of the cold-wire snare.

From the foregoing considerations some very important conclusions may be drawn. The first is that hay fever and asthma are curable diseases, and in fact are much more amenable to treatment than nine-tenths of the diseases to which human flesh is heir. That this cure can be effected without recourse to the almost endless list of drugs and nostrums which are advocated for their relief from the "Liquor Ambrosia" of Curtis to the poisonous compounds of sedatives and alteratives sent out by the quack institutions which advertise to cure these most common maladies.

The second is that the use of the cautery in the nose in any form must be tabooed by the nasal surgeon as being a most unscientific and unsurgical procedure.

OPIUM NARCOSIS

To summarize the advantages of tickling in opium narcosis:

1. The doctor has it handy.
2. Wide range of application.
3. Simplicity.
4. Leaves no marks of violence.
5. Efficacy.

SMALLPOX EPIDEMIC IN AN ALBANY ORPHANAGE.

Of the forty-five children in the institution only one had been vaccinated, and that one alone failed to take the disease. Of nine adults, six had been vaccinated and did not contract the disease. Three had never been vaccinated, one of whom was successfully vaccinated when first exposed, and did not contract smallpox, and two had the disease, in one of whom it ran a severe course. Several of the adults had only been vaccinated once, and then in early childhood, so that infancy vaccination afforded sufficient protection. All the children were vaccinated during their sickness, and some a second time on recovery, but the result was negative in every instance. The virus used was from a lot which produced ninety-five per cent of successful vaccinations in the larger orphanage.—Albany Medical Annals.

FILTERED WATER

To-day the purification of polluted waters by the process of filtration through sand beds is regarded as the most important milestone marking the progress of modern sanitary engineering. Let me cite to you some of the effects of this method in preventing the incidence of such water-borne diseases as typhoid fever and Asiatic cholera. Within less than a year after the purification of the water supply of Lawrence, Mass., by filtration, the typhoid death rate was reduced 57 per cent. During the few months that intervened between the completion of Albany's filtration plant and the publication of the annual report of the Water Bureau there was a reduction of about 70 per cent in the incidence of typhoid fever. The average annual typhoid death rate per 100,000 of population in Hamburg for the thirteen years before the installation of filtration was 39.7. For the first seven months following this rate fell to 18, and for six years after starting the filters the average annual typhoid death rate was only 9, as against 39.7 before.

In the year 1894 the average of the typhoid death rates in ten cities using filtered water was 8.3 per 100,000 of population, while for fifty-four cities in this country and abroad whose water supplies were derived, without treatment, from wells, springs, impounding reservoirs, lakes, upland streams and normal and polluted rivers, the typhoid death rate was 33.2 per 100,000 of population, that is to say, just four times as great as that observed in cities using water purified by this method.—Maryland Med. Jour.

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EXPERIMENTAL SCIENCE

Professors Jacques Loeb and Albert P. Matthews, of the University of Chicago, at the meeting of the American Physiological Society, held in Chicago, Dec. 31, gave a detailed account of their experiments with cells and nerve tissue..

It will be remembered that Loeb attracted a good deal of newspaper misrepresentation by his experiments with salt solutions one year ago. With sea-water of varying strength he was able to bring about artificial fertilization. Eggs that had known no contact with the male cells developed into normal living beings, and thus biological theories that had been held for years sustained a severe jar. This year Loeb demonstrated the seeming fact that unfertilized spawn of sea-urchins could be kept alive for seven days by placing them in a weak solution of cyanide of potassium, otherwise they die in a few hours. These are steps in the scientific search of immortal life.

Matthews, following Loeb's lead, has advanced the theory that the energy from foods is not heat, but electricity, or that chemical energy is transformed into electrical energy, which, in turn, gives energy to the muscles and organs of the body. He also believes that the axis cylinder is surrounded by a jelly-like mass, the substance of Schwann, and this, in turn, covered by a non-conducting sheath, makes the nerve trunk a conducting medium for the electric or nerve current. He attributes to this jelly-like substance qualities peculiarly adapted for the conduction and distribution of electrical energy. This elaboration is the revival of the old theory of nerve currents, that energy, presumably electric-like, traveled by molecular transmission from one point to another. The theory is beautiful and plausible, considering our limited knowledge of nerve currents. This and the theory of Loeb concerning the shade of immortal life, have called forth some discussion among physiologists, who claim that the vital question is still a mystery,—from whence does life spring, and how?

FAKIRS

The "Man from West Superior" who advertises so lustily in the daily papers, is evidently planning for the retirement of the orthopedist and the osteopath. He is ably assisted by a minister of the gospel who, under his own name, vouches for the veracity, honesty, skill and work of the bone-setter. The bone-setter reduces deformities and dislocations by a single turn of the wrist; cases that have defied skilled surgeons are cured in the twinkling of an eye by simply placing the bones and joints in their proper position. The reverend associate stands by and murmurs that "God moves in a mysterious way his wonders to perform." Truly, he does, if the tales of the b.-s. and the willing theologian are to be believed.

Did you ever hear of a patent medicine or a fakir who did not find a minister or two who gladly and cheerfully gave a strong testimonial lauding the bottle or the fakir? Is it not an evidence of neurotic constitution, or a tendency toward mental enfeeblement, that prompts a man who is supposed to have broad enough mind to preach and teach the gospel, to lend himself to such nefarious practices?

In a town in North Dakota a minister has turned toward the practice of medicine on the fake basis. His instruments and means of diagnosis is an x-ray machine, and his drug store a barrel of medicine. His business has become so great that a large hotel has been built to accommodate his visitors. He sees so many patients a day that he gives each one but three minutes.

He asks the patient no questions, but turns his fluoroscope upon him, looks him thoroughly through and through, makes his diagnosis, and orders his helper to give him a pint or a quart of dope out of the barrel, charges four dollars, and rushes in the next invalid, who goes through the same formula.

Commercially, the scheme is a great success; psychologically, the impression is wonderful; scientifically, doubtful; morally, the ultimate effect is disgraceful. Presently the supply of Crookes' tubes will be exhausted, the fluoroscope will wear out, the plates of the machine will crack, a different form of fakir will take the place of the deposed first, and the hotel will be for rent unless the supply of neurotics and their money continue to multiply.

AN ANTI-VACCINATIONIST

The other day while the health officer and his associates were vaccinating the lodgers in a lodging-house in Minneapolis, they ran across an anti-vaccinationist. He objected to the operation on the ground that he not not believe in it. When asked by Health Commissioner Hall if he believed in smallpox he wilted, and tearfully asked if he had it. He was told that he had smallpox, and was removed to the quarantine hospital. He made no objection.

If a few more antis were to contract smallpox because they had neglected a simple precautionary measure the societies would suffer from lack of membership and enthusiasm.

An object lesson of this sort is worth more than a hundred arguments against vaccination. Better be vaccinated.

The State Board of Health reports 8,485 cases of smallpox in Minnesota for the year ending Dec. 31, and 43 deaths. New cases are reported daily. This number is six times greater than the number of cases in the state in the year of 1900.

Several of the physicians of this city have reported cases that came for office consultation, some of whom were detained until the arrival of the health officer, while a few have escaped. A few days ago a student of the University of Minnesota was found suffering from the disease. He had taken his meals at a large boarding-house, and had mingled freely with the other students. Every precaution was taken to prevent further contagion.

The daily press reports an outbreak of smallpox in Somerset House, the great government building in the heart of London, where 2,000 clerks are employed. An epidemic is feared, and London may be in quarantine during King Edward's coronation. The transatlantic lines of steamers are enforcing vaccination among the crews. It would not be surprising if England had to repent its haste in declaring vaccination not compulsory.

The physicians in this country are busy vaccinating. It would be well if all physicians would advise vaccination to those who contemplate a journey, either at home or abroad.

Fortunately, the disease is mild and creates but little uneasiness, so little, in fact, that patients are careless in exposing themselves to others. The unvaccinated are procrastinating. Unless the epidemic is checked, and people are more generally vaccinated, the disease will become more virulent and fatal.

THE MARCH MEETING OF THE HENNEPIN COUNTY MEDICAL SOCIETY

The meeting of the Hennepin County Medical Society in March promises to be the best meeting of the year. Dr. E. H. Ochsner, the celebrated surgeon of Chicago, has promised to read a paper on a surgical subject; and Dr. J. B. Herrick, of the same city, a celebrated internalist, will also be present and will present a medical topic. These two gentlemen will attract medical men from out of town, and the capacity of the Hennepin County Society rooms will be taxed to their limit.

It is proposed to begin the evening with a dinner at the Commercial Club, the dinner to cost the nominal sum of one dollar per plate, so that no one will be burdened with expense. This dinner marks the real annual meeting of the society, and is to promote sociability and good fellowship. When the announcement cards are sent out the members of the society and others who receive invitation are urged to respond by card that the committee may know how many to provide for. Country physicians are particularly invited.

The full program will be announced in the Lancet of February 1 or 15.

CORRESPONDENCE

EASTERN HOSPITALS AND SURGEONS —A NEW DISEASE

New York, Dec. 20, 1901.

Editor of the Lancet:

Thinking it might be of interest to the readers of the Lancet to know of some of the changes that are taking place in the medical colleges and hospitals of the East, I will relate some thus far observed on my trip.

In the first place, we notice a marked change taking place in the older schools, from the didactic to the clinical form of teaching. Conferences, so called, are held in the various branches in which sections of the class examine the patients and make diagnoses. At the University of Pennsylvania, Musser's conference on physical diagnosis is very instructive. He uses the lantern and slides, throwing a picture on the screen showing the normal relations of the organs with very good effect. Dr. Clark, professor of gynecology at the University of Pennsylvania, also uses the lantern while lecturing to the class, thus bringing out, more clearly than could be possible in any other way, the various pathological conditions.

The method of teaching at Johns Hopkins, where the work of the last two years of the college course is nearly all done in the hospital, would seem to be best where the classes are not too large, but in the older and larger schools this seems almost impossible. As Dr. Musser said in regard to clinical teaching, "It is by far the most practical, but it does not permit of any fancied flights in oratory."

In noting some of the newer features in surgery, one might mention Dr. Halsted's modification of his inguinal hernia operation on the male, in which he does not transplant the cord or change its position, except to crowd it well down to the spine of the pubes. The nest of veins lying on top of the vas is removed without disturbing it from its bed. In other words an operation the same as for varicocele is performed, thus reducing the size of the cord and allowing it to be crowded down more closely to the spine of the pubes, and so leaving a much smaller ring for the cord, thus diminishing the danger of recurrence. The remainder of the operation is done the same as formerly, using buried silver wire to close the canal, subcuticular wire for the skin, and silver foil for the external dressing.

One of the most interesting clinics I have seen was an operation by Dr. Curtis at St. Luke's Hospital, New York city, on a nervous old woman. It was an amputation just below the knee for gangrenous foot, resulting from arterial sclerosis, and was done under spinal anesthesia. Her very feeble condition contraindicated general anesthesia, and Dr. Curtis said he has been accustomed to resort to spinal anesthesia only in such cases. Some difficulty was experienced in entering the canal with the point of the needle, due to spasm of the muscles through which the needle passed, and to the irritable condition of the old woman. Finally three or four minims of the cocaine solution were injected into the tissue, and the needle passed without further difficulty. Twenty minims of a 2 per cent cocaine solution were then injected, and in ten minutes the anesthesia was complete in the limbs. Later the line of anesthesia extended to the ensiform cartilage, although the injection was made in the fourth lumbar interspace. The amputation was performed without the patient experiencing the slightest discomfort, and she was removed from the table in one-half hour from the time of the injection.

Another interesting experience was making the rounds in the General Memorial Hospital with Dr. Coley, and seeing patients upon whom he was using the Coley serum for sarcoma. All of the cases were inoperable, and some were recurrent. The results of the injections on some are surprising. One male patient, referred to him for treatment by Dr. Bull, because the tumor had extended too far for removal, had had a mass the size of one's fist projecting from the cheek below the right eye. The growth had also extended through into the mouth, involving the greater part of the roof of the mouth. Injections of the serum into the mass were begun a few weeks ago, and now, instead of a tumor on the face, there is a marked depression, due to the absorption of the bone by the sarcoma, and later the absorption of the tumor, due to the effect of the serum. There is still some of the tumor remaining to be seen in the roof of the mouth.

Prof. Welch's pathological report on the tumor states that it is a small round-celled sarcoma. These, as a rule, are least amenable to treatment with the serum, while the spindle-celled variety yield much more readily.

After attending the meetings of the surgical societies in the East, one is forced to believe that there is a new disease which seems destined to become a rival of appendicitis. This is called *acute pancreatitis,* and its treatment is surgical. Differential diagnosis is quite impossible. The symptoms are pain in the belly, especially above the navel. Exploratory laparotomy reveals evidence of peritonitis, with bloody serum in the abdominal cavity; in some cases areas of fat necrosis; and sometimes a hardened and enlarged pancreas with abcess formations. The treatment recommended is drainage from the region of the pancreas. Recovery takes place gradually.

Rubber gloves are becoming almost universally used by eastern surgeons, and there are about as many varieties as there are surgeons. At Johns Hopkins a heavy glove is used, which, they tell me, wears for a month, being boiled at least three or four times a day. The kind generally used in Philadelphia and New York is moderately heavy and seamed, and they are much more durable than the very thin, tight-fitting ones we have been accustomed to use in Minneapolis. Gloves are not worn at the Post-Graduate School, New York, and I am told their records will compare favorably with any other hospital in the city.

R. E. Cutts.

SULPHONAL POISONING

The chief characteristics of chronic poisoning by sulphonal are stated to be disturbance of digestion, attended by vomiting and diarrhea or constipation; disturbance of the nervous system, such as ataxia, feebleness of the limbs, ptosis and ascending spinal paralysis; disturbance of the renal secretion, shown by scantiness, sometimes by albuminuria and frequently by the presence of hematoporphorin in the urine. Karst, for instance, states that even under these conditions, if the sulphonal be withdrawn, recovery rapidly follows, the alimentary tract being purged, and that as long as the alimentary tract is kept free and the kidneys active no danger need be apprehended. He, with other writers, however, urges that sulphonal be discontinued from time to time to avoid toxic effects. They state that anorexia, vomiting and pains in the stomach or bowels may be regarded as indications for the discontinuance of the drug.—Chicago Medical Recorder.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

R. O. Beard, M. D., Secretary

Stated meeting, Wednesday evening, Jan. 8, 1902, at the Hotel Ryan, St. Paul; the president, Dr. J. T. Rogers, in the chair.

Dr. J. E. Moore, of Minneapolis, presented a specimen of uterine myoma, the case bearing upon the mooted question of myectomy vs. hysterectomy. The specimen indicated the mechanical possibility of myectomy; but, in consideration of the age of the patient (44), the unlikelihood of child-bearing, and the necessity, which would probably have obtained, for tying the uterine arteries, hysterectomy was considered the more feasible operation.

Dr. A. W. Abbott, of Minneapolis, read a paper entitled "A Continuance of the Discussion of the Technique of Abdominal Operations."

Dr. J. E. Moore, discussing the paper, said it was difficult to decide how much or how little should be done in preparing a patient for operation. He had been familiar with Dr. Abbott's work for years, and he did not think he had had more stitch abscesses before than since his use of ichthyol. Why should one use this ill-smelling material if he can do as well without it?

The described technique in closing abdominal wounds was admirable, but it took a good deal of time, and he doubted whether Dr. Abbott had experienced hernia oftener without than with its adoption.

Dr. C. H. Hunter, of Minneapolis, said that he would like further details of the pathological appearance of the peritoneum in the two cases of tubercular peritonitis cited by Dr. Abbott as cured by operation. He sas sceptical of the cure of these cases by operation. We should be loath to expect cure from opening synovial surfaces infected with tuberculosis, and similar doubt exists with respect to the peritoneum.

Dr. Abott, in closing, said that the use of ichthyol in the prevention of stitch abscesses was still experimental, and its ultimate value had to be determined. As to the use of the figure-eight suture he maintained a more perfect closure of abdominal wounds by its use than by any other method, and was sure it reduced the likelihood of hernia.

The diagnosis of the cases of tubercular peritonitis had been confirmed by the use of Koch's lymph and by the pathological appearances which were characteristic. Cure had invariably followed operation, a result in which he believed the experience of all his hearers shared.

Dr. Justus Ohage, of St. Paul, discussed the surgical treatment of superficial tubercular peritonitis, and cited details to show complete recovery after operation.

Dr. W. A. Dennis read his inaugural thesis upon "Renal Tension."

Dr. A. W. Abbott, of Minneapolis, referred to the prevalence of movable kidney and the likelihood of twisted ureter in these cases, accounting for the symptoms of tension without disease of the kidney. He discussed, further, the differentiation of disease in one kidney from that in the other.

Dr. J. B. McGaughey, of Winona, said that he was especially interested in the paper of Dr. Dennis, coming so soon as it does after the appearance of Edebohl's paper which was published in the Medical Record recently, in which he recommended the removal of the entire capsule. The expedient advocated by Harrison, of splitting the capsule for relief of tension, is certainly to be preferred as destroying less tissue and apparently securing as good results.

Dr. J. L. Rothrock, of St. Paul, could not subscribe to the views of Dr. Dennis. He believed they were contrary to what is known of the pathology of the kidney. He admitted that nephrotomy undertaken in mistaken suspicion of stone, had seemingly improved. He did not think the relief was secured by operation, but by coincident rest, diet and medical treatment.

In regard to so-called inflammations of nephritis, with the exception of acute infections, these lesions are improperly termed inflammations. They are characterized, first, by cloudy swelling, and, second, by degeneration of renal cells. He could not entertain the view of the non-elasticity of the kidney capsule; he believed it quite capable of accommodating itself to changes in the volume of the kidney. He thought that these operations for loosening the renal capsule had not gone far enough to determine their effects. The theory of renal tension was ingenious, but of doubtful demonstration. He was as enthusiastic as most surgeons in regard to new operations, but he thought we should go slowly in the adoption of so radical measures.

Dr. F. A. Dunsmoor, of Minneapolis, did not believe that the good effects of mere rest, etc., in renal disturbances were clinically sustained. He thought that surgical interference had demonstrated the relief of tension of this as of other organs, such as the thyroid gland.

Dr. A. McLaren, of St. Paul, said that he was interested in the subject on both sides. Some six years ago he had operated upon just such a case as Dr. Dennis described, with suspected stone, a suspicion sustained by symptoms. No stone was found, but the symptoms were relieved by operation. He had operated upon the renal capsule for relief of symptoms of renal tension, but with absolute failure.

Dr. R. O. Beard, of Minneapolis, said that while he was surgically uninformed, he was physiologically familiar with the kidney capsule, and that experiments with the oncometer proved the elasticity of that structure by the excursion which the kidney executes under cardias and respiratory pressure.

Dr. Talbot Jones, of St. Paul, said that Dr. Dennis did not refer to the experience of Dr. Newman, related to the Glasgow Medical Society recently, in eight cases he had operated upon with improvement, although in four his diagnosis was mistaken. Differential diagnosis of renal tension was obscure. He would like Dr. Dennis to describe the clinical picture which would enable us to determine renal tension.

Dr. Abbott asked whether so-called renal pains were not due to the distension of the pelvis rather than of the kidney itself.

Dr. C. H. Hunter, of Minneapolis, recited a case in which repeated attacks of renal pain of a colicky nature seemed to indicate calculus. The kidney was cut down upon and the pelvis palpated without discovery of stone, but no incision made. The patient was entirely relieved; why, he did not know.

Dr. Dennis, in closing, said that he had gained the impression of the inelasticity of the kidney capsule, although it would undergo gradual distension under pressure, but with consequent thinning. Pain was not always to be relied upon as indicative of renal tension. This tension is a condition rather than a disease and accompanying many disorders. He cited diseases in which such tension may occur, and those in which operation upon the capsule had been remedial. He was unable to say whether kidney pain was always traceable to the pelvis, but he did not believe it was.

Dr. Judd Goodrich, of St. Paul, read his inaugural thesis, entitled "Tubal Pregnancy; Its Etiology and Treatment."

Dr. A. W. Abbott, of Minneapolis, said, with reference to the ciliae, that since the ovum was several hundred times the size of the ciliæ, this agency of movement might be abandoned as inconsiderable.

Dr. J. L. Rothrock, of St. Paul, referred to recent work in the imbedding of the ovum in the Fallopian tube. It had been generally believed that a decidua was formed always at the point of fixation of the ovum in the tube, but this had been found not to be genuine decidual cells, although a few decidual cells might be present. His attention had been called lately to an interesting theory of phagocytic action of these cells in destroying the muscular fibres of the tube, thus leading to its rupture. Of all the theories which had been advanced to account for the lodgment of the ovum in the tube, none was yet satisfactorily accepted.

Dr. R. E. Cutts, of Minneapolis, emphasized the view that inflammatory conditions in the tube were responsible for tubal pregnancy. He had seen cases of gonorrheal salpingitis which were illustrative of this view. He referred to a case of four weeks' fetal development in which rupture had occurred before distension could have accounted for it. In regard to the number of cases in which cure follows rupture without operation he thought it undetermined.

Dr. Walter Courtney, of Brainerd, believed that the larger share of cases of extra-uterine pregnancy he had seen were of non-inflammatory conditions in the tubes. He cured a case sent to him for operation for fibroid tumor, in which he diagnosed an abdominal pregnancy. History showed the probability of three previous hemorrhages. The fetus, upon operation, was of five months' development; was evidently long dead and mummified, and the placenta was necrotic. The operation was attended by much hemmorrhage.

Dr. Goodrich, in closing the discussion, insisted upon the power of the cilium to forward the movement of the ovum. In many cases of inflammation, the ciliæ are not destroyed.

Upon motion, the Academy adjourned.

COLORADO CLIMATE AND HEMORRHAGE

My conclusions are—

1. That hemorrhage by itself, save with few exceptions, furnishes no criterion upon which to base a choice of climate, the indications for high altitude in uncomplicated and in not too-far-advanced cases being highly imperative independent of this single manifestation.

2. That an exceedingly small proportion of recurrences may be expected in Colorado, although not necessarily reflecting accurately the degree of ultimate improvement secured.

3. That recurrences are more likely to result, and that quickly, in those cases with hemorrhage immediately preceding arrival, and hence the wisdom of a short delay following the hemorrhage before leaving home and unusual precautions as regards rest upon arrival.

4. That primary hemorrhages are comparatively rare in Colorado and usually take place incident to a rapid progressive destructive change in cases already with hopeless prognosis, or as a natural result of some external assignable cause, which under proper régime could be avoided.

5. That hemorrhage, while less likely to occur in Colorado than at sea level, is nevertheless, as a general rule, more severe and associated with greater shock.

6. That the avoidance of hemorrhage, particularly in the early months of Colorado life, demands a most rigid compliance with detailed instructions.—S. G. Bonney, Denver, Colo.

MILK-SUGAR IN INFANT FEEDING

It appears after all this that it is easier to give too much milk-sugar than too little, and that the careful measuring and weighing of copious quantities of milk-sugar is of doubtful value, even if you know, or believe you know, that the milk-sugar you give and the milk-sugar of woman's milk are identical. Immediate fermentation in the intestine, moreover, should be carefully avoided for other known reasons. Lately Dr. Helen Baldwin has published (Journal of Experimental Medicine, Vol. V.) investigations which prove the formation of oxalic acid as the result of intestinal fermentation. It appears, therefore, that my method of adding to the cow's milk mixtures destined for infants and children, not milk-sugar but cane sugar, in moderate quantities estimated rather than anxiously weighed, was correct and justified by modern research.—A. Jacobi.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. R. A. Geise has located at Eagle Bend, Minn.

Dr. J. L. Livingston has located at Pelican Rapids, Minn.

Dr. J. S. Kilbride has moved from Sleepy Eye to Canby, Minn.

Dr. Wm. Proesch has moved from Watkins to St. Martin, Minn.

Dr. M. N. Triplett, of Dawson, has moved to Floodwood, Minn.

Drs. Johnson and Kendrick, of Austin, Minn., have dissolved partnership.

Dr. Olaf Sand, of Norway, has become assistant to Dr. Tufte, of Pelican Rapids, Minn.

Dr. S. D. Sour, or Zumbrota, has taken the practice of Drs. Holman at St. Clair, Minn.

Dr. Stewart Leech, of Brooten, Minn., has plans for a new hospital to be built in the spring.

Dr. H. C. Stuhr, of Argyle, Minn., was married last week to Miss Susie K. Easton, of Warren.

Dr. O. J. Brown, of St. Cloud, has returned to his work, having taken a post-graduate course in New York.

Dr. F. E. Burch, of Glencoe, Minn., was married last week to Miss Katherine Jackson, of the same place.

The new hospital of Dr. Budd, at Two Harbors, Minn., which will cost about $20,000, will soon be completed.

Dr. Louis O. Fiset, of Grand Forks, N. D., has gone to San Diego, Cal., to become surgeon in a private sanitarium.

Dr. F. W. Burns, of Stewartville, Minn., moved into his handsome new residence on New Year's, and gave a house-warming to his neighbors.

The new hospital of Sioux Falls, S. D., completed only a few months ago, has become so overcrowded with patients that the building will be doubled in size.

Dr. Loretta Pettit Baird, of Rushmore, Minn., died last month. Dr. Baird was graduated from the Medical Department of the State University with the class of '74.

Dr. R. M. Phelps, of Phœnix, Arizona, has returned to Minnesota after an absence of several years in the south. Dr. Phelps becomes assistant superintendent of the State Hospital at Rochester.

Somebody remarked the other day that he observed the senior class of the homeopathic department of the University sitting with his feet on the table, clamly awaiting the tardy arrival of his belated professor.

Dr. Andrew Howell, formerly of Osakis, Minn., died at Eagle Bend, Minn., last month. Dr. Howell was a graduate of the University of Buffalo, and also of Bellevue, and had been a surgeon in the U. S. military service.

The plans for a new building, now in the hands of the trustees of St. Peter Hospital of Helena, Mont., call for an expenditure of $50,000. Miss Nina Young, the superintendent, has been in the East on a tour of inspection, during which she visited nearly thirty hospitals.

CURE OF MENORRHALGIA BY ELECTRICITY.

In electricity (as many physicians will now agree) we have a most valuable remedy for the permanent cure of persistent menorrhalgia, even of the most severe forms. Unfortunately, little is written at present from this point of view, and the unopposed views of the dilatationists remain uncontradicted. The electrical method may be carried out in office practice, is free from risk to already congested appendages, and may be relied on to cure, if conjoined with intelligent regulation of the general health and habits of the patient.

The technique consists of judicious blending of vagino-abdominal applications of the positive pole of the galvanic current with similar intrauterine applications of the same current. The intra-uterine applications must not be used, however, until the congestive condition of the appendages is relieved, after which the local effect of mild mercuric cataphoresis within the cavity will quickly remove the endometritis, which (generally having its inception in "catching cold" during a menstrual period), is the initial lesion of the affection.

This choice of the positive pole is deliberately made as the result of large experience, results showing that electricity does not owe its value in these cases to a dilating effect, as some think (this effect being greatest at the negative pole), but rather to the cure of the endometritis. If there is no endometritis the electrode need not be past within the uterus at all, the internal electrode being applied within the vagina alone.—Am. Jour. of Surg. & Gynecology.

NUTMEG POISONING

In all cases of nutmeg poisoning there was prostration with partial or complete coma. Most of them had vertigo, delirium, chiefly hallucinations of sight, rapid, feeble pulse, and free urination. In five instances the nutmegs were taken to produce abortion, and in every case without accomplishing the desired result. All reporters agree on a stimulating treatment following a thorough cleansing of the gastro-intestinal tract. Where deep coma does not supervene, the prognosis is good under prompt treatment.—E. E. Hinman.

NORTHWESTERN LANCET

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SOME POINTS CONCERNING IRREDUCIBLE AND STRANGULATED HERNIA*

By J .B. McGaughey, M. D.

WINONA, MINN.

The literature of hernia, of all varieties, during the past century, affords an interesting and instructive example of the advances that have been made in nearly all of the departments of medicine and surgery, and especially in this single class of affections which contribute so largely to the total of the suffering, discomfort and danger, to which the human race is subjected. An attempt to review, in a paper limited as this must be, would be manifestly improper, incomplete and unsatisfactory.

We may contrast the chapter on hernia, in the justly celebrated Commentaries of Heberden, with the articles on the same which appear in any modern work on surgery. Without incurring the risk of becoming prolix, this chapter may be given in full as follows: "Chapter 45: Hernia. Ruptures require no other remedy than a bandage or truss."

It is a well known fact that many reducible ruptures are carried throughout a long lifetime without causing great inconvenience, producing serious symptoms or placing the patient's life in jeopardy; but it is equally true that every case carries with it a latent element of danger, which may at any time become active and destructive if prompt relief is not secured. However innocent the course of a given case of irreducible hernia, of whatever variety, may have been, there is no warrant for assuming that it will always continue to be so. A case came under my observation within a comparatively short time which emphasized this point. As it possessed some unusual features, a brief description may be of interest:

A man who had passed the allotted three score and ten years was suddenly seized with intense pain in the abdomen, which was soon followed by vomiting. His physician properly advised quiet, and resorted to the usual remedies for the purpose of allaying pain and vomiting. These were only partially successful. In the evening of the second day I saw the patient in consultation. Examination showed the presence of a small mass in the median line of the abdomen, about midway between the navel and the inferior extremity of the ensiform cartilage. This appeared to be doughy, inelastic, and evidently the seat of inflammatory action. We were assured by the patient that this tumor had existed for many years without causing any inconvenience. He stated that he knew a rupture when he saw one, and exhibited a well-defined indirect inguinal hernia, supported by a properly adjusted truss.

As all attempts to secure relief and to effect an evacuation of the bowels had proved failures, an operation was advised. He was removed to the hospital on the next day, the character of the vomiting having become stercoraceous during the night. Upon uncovering the mass, it was found to be composed wholly of omentum, which was much inflamed. Further investigation revealed the actual source of obstruction, which was a loop of the small intestine, which had found its way to the front of the omentum, just above the hernia, and had become fixed in the lower angle caused by the union of the omentum and the parietal peritoneum lining the anterior wall of the abdomen, thus causing complete obstruction of the bowel in the same manner that has been occasionally observed in patients who had been subjected to the once common, but now fortunately nearly obsolete, operation known as ventral suspension of the uterus. The bowel was quite dark but soon regained its color after the constriction was removed to a degree that gave sufficient promise of life and resumption of function.

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*Read before the Winona County Medical Society, January 7, 1902.

In this instance there is reason to regret that the contents of the stomach were not removed by the stomach-tube prior to the operation, as the patient succumbed in a few days to pneumonia, believed to have been caused by insufflation when vomiting after anesthesia. The symptoms due to obstruction were entirely relieved, and copious evacuations of the bowels were obtained on the second day.

A simpler form of hernia, and one less liable to lead to disaster than that above described, cannot well be imagined. The character of the contents, the high location in the abdomen, and the length of time it had existed without producing symptoms, would tend to allay any suspicion of danger from its presence. It is believed to be the plain duty of the physician or surgeon in every instance in which irreducible hernia is found, to inform the patient fully of the possibility of serious consequences arising therefrom, and to advise operation, the small risk accompanying this procedure being of much less importance than the constant menace which attends the affection.

Strangulated hernia will ever be a source of anxiety to the practitioner, and of serious danger to the patient. Its literature, until within the past few years, has been peculiarly discouraging. In Holmes' "System of Surgery," appended to the elaborate article by Mr. John Birkett, is found the following foot-note: "Mr. Hey states that when he entered the profession of surgery (now 100 years since) the operation for strangulated hernia had not been performed by any of the surgeons in Leeds," and he adds that he "lost three patients in five upon whom the operation was performed." Following this quotation the author asks: "Are the results of the treatment of strangulated hernia more successful at the present day?" and he answers: "We fear not." This, it should be remembered, is from a standard work revised and brought out under the supervision of an American author and editor barely two score years ago.

If we turn from Holmes' "System" to that of our own Gross, we meet with records and prognostications little, if any, less gloomy, though we find early operative interference advocated, and prolonged or violent efforts to secure reduction severely condemned.

No feature in connection with the operation a quarter of a century ago provoked more discusson than that of dealing with the sac. A few surgeons were bold enough to advocate incision of the sac, thus invading that almost forbidden region the peritoneal cavity. Statistics were collected showing the relative mortality in cases in which the sac was opened, and those in which it was not. These statistics, though favorable to the latter procedure, were admitted to be somewhat unreliable for the reason that incision of the sac was more frequently performed in graver and more complicated forms. Such admissions bear testimony to the fairness of the disputants, and to their efforts to arrive at conclusions supported by facts.

It is well to bear in mind that, at the period at which these observations were made and the results collected and tabulated, aseptic and antiseptic surgery was not in existence, and the invasion of the peritoneal cavity was justly regarded as a measure fraught with peril, and that the conclusions reached concerning the increased mortality in those instances in which the sac had been opened was sustained by honest experience.

The advent and development of modern surgery, aseptic and antiseptic, has definitely settled these questions, largely reversing former decisions. No operator at the present time would regard his work as having been properly performed if he had failed to open the sac for critical examination of the contents.

Cases have been observed in comparatively recent years in which operation was successful in reducing the rupture, but the results were unfavorable, for the reason that one cause of obstruction remained, the tumor having been returned *en masse*.

The proper manner of dealing with the protruded omentum remained undecided for many years, and called forth conflicting opinions and advice. This, of course, was in the pre-aseptic era, and before the use of the absorbable ligature had become general.

In dealing with strangulated hernia, it is not proposed to advise against the employment of taxis for its reduction, but such taxis should be free from violence and not unduly prolonged. This measure is especially dangerous when the patient is under the influence of an anesthetic. The propriety of resorting to anesthetics in these cases may be questioned, although it must be admitted that in many instances reduction has been accomplished with safety by the aid of these agents. Should such efforts prove unsuccessful, it may be safely affirmed that the gravity of the situation has been increased.

For the purpose of removing the gaseous contents of the imprisoned bowel and aiding in effecting reduction, the insertion of a hypodermic or aspirating needle was recommended, and practiced some years ago. This method should be mentioned only to be condemned. About a quarter of a century ago this procedure enabled me to reduce a rupture which had resisted all other attempts. The patient recovered in spite of my effort to prevent him from doing so. Sins of this kind are not likely to be repeated.

Operation for the relief of strangulated hernia should be undertaken as soon as the condition has been established and it has been demonstrated that reduction cannot be effected by taxis, with due regard, of course, to the proper preparation of the patient and surgeon. It is unfortunate that in many instances hours, and even days, are spent in idly waiting, but such loss of time should be no excuse for failing to make the effort to secure relief. No case of strangulated hernia, not actually moribund, should be denied the chances afforded by operation, for good recoveries have been observed in desperate and, to all appearances, in nearly hopeless conditions.

If stercoraceous vomiting has occurred, or is present, thorough lavage of the stomach should precede the administration of the anesthetic. An intestine that is not clearly dead should be given an opportunity to recover after being relieved from constriction. The application of hot moist gauze sponges hastens the restoration of the circulation in the recently imprisoned gut. Operations for strangulated hernia are not performed at the best time or under the most favorable circumstances for effecting a radical cure, but an endeavor to secure this result should always be made. Dr. A. J. Ochsner insists that protruding omentum should be ligated and excised, for the reason that, if returned to the abdominal cavity, it is likely to find its way to the location of the recent opening, and, by acting as a wedge, separate the tissues and re-establish the hernia. This opinion seems to be supported by sound reasoning and ample observation.

The following case is reported for the purpose of encouraging attempts to secure relief when the conditions are such as to afford little ground for hope of success:

Mrs. H——, above sixty years of age, had carried a femoral hernia for many years. The mass was of considerable size, and gave inconvenience, but caused no serious symptoms until about the middle of November, 1901, when she was seized with intense pain at the seat of the rupture. Vomiting appeared soon afterward. The attending physician, Dr. C. A. Boyd, made reasonable efforts to effect reduction, but failed. The mass was nearly the size of an infant's head. The furrows in the skin above and below the tumor were broken and ulcerating, the raw surfaces being about one and one-half inches in width by six inches in length. On the second day, with the aid of Drs. Boyd and H. F. McGaughey, operative measures were adopted. The suppurating areas above and below the mass were cleansed and packed with gauze. A long incision was made parallel to and midway between the ulcerated surfaces. The mass consisted mainly of greatly thickened omentum, which was black and had a very offensive odor. Upon incising the peritoneum a large quantity of dark serum escaped. A knuckle of intestine was found fixed at the inner part of the ring. Gimbernat's ligament was divided in the usual manner, and moist heat was applied to the black bowel, which showed signs of slow improvement in the circulation, after which it was reduced. The omentum was drawn down, tied in sections, and excised. The portion removed weighed not less than two pounds. The adhesions of the sac to the ring were broken up. The sac was drawn down, ligated, and excised well above the portion formerly attached to the ring. The wound was closed with silk-worm sutures except at the lower angle, in which a small catgut drain was inserted. The after treatment was given by Dr. Boyd, who reports reasonably prompt recovery without suppuration.

The points I have attempted to make in the foregoing may be enumerated as follows:

1. Every irreducible hernia is a menace to the patient, and it is the duty of his medical advisor to fully explain the possible dangers and to recommend interference.

2. Strangulated hernia should not be subjected to violent or prolonged attempts at reduction, but operation should be resorted to as soon as possible after reasonable attempts to replace it have failed.

3. The sac should be opened in every case.

4. The omentum should be tied securely, and cut off well above the point of constriction.

5. Lavage of the stomach should be made use of prior to the administration of the anesthetic if there has been stercoraceous vomiting.

6. No case not actually moribund should be refused operation.

REFERENCES

1. Commentaries on the History and Cure of Diseases, by William Heberden.

2. Holmes' "System of Surgery," First American Edition.

FRACTURES OF THE NECK OF THE FEMUR, AND THEIR MANAGEMENT*

WITH DISCUSSION

By W. E. Rochford, M. D.

MINNEAPOLIS

In selecting the subject "Fractures of the Neck of the Femur and their Management," I do it, not because I have anything new to offer, but because I believe the subject to be of practical value to every man engaged in the practice of medicine and surgery.

A review of some of the well-known facts and the present-day methods of treatment, cannot but prove profitable. The treatment of the subject by most of the text-books, has not materially advanced for years. Nearly every author gives a stereotyped description and form of treatment. The subject has not received the attention that has been given to other fractures, and there has been little improvement.

Fractures of the femoral neck are dealt with by most men of to-day, practically as they were in the time of Hamilton. Though it be conceded that no more classical work on fractures exists, and that his views have been accepted and followed by the ablest surgeons in all lands, yet is it not a timely question to ask whether we cannot improve on those methods of treatment?

Hamilton lived in the days of pre-aseptic surgery, and naturally every advance in the care of fractures, was, of necessity, mechanical. There could be no successful operative interference in fractures of this importance. Hamilton and Sir Astley Cooper believed in the possibility of bony union in intracapsular fracture, but from Hamilton's own words there is no doubt that he thought it a very rare thing. These are his words: "To deny the possibility of their union, and to maintain that no exception to this general rule may take place, would be presumptuous."

We have been satisfied, because of former teaching, and have contented ourselves, in the management of these cases, by doing little or nothing, and trusting to luck. We have told our patients that in all probability they would be cripples the rest of their natural lives, and that bony union in intracapsular fracture is a visionary thing, and not to be looked for. Thanks to the efforts of a few men, a better knowledge of pathology and the treatment of fractures has changed these views. We are gradually becoming dissatisfied with the present methods of treatment, and feel that better results can be had, if only the proper management is carried out.

Dr. Senn has taught us, from numerous experiments on animals, that bony union does occur in intracapsular fracture, if the fragments are held in apposition and properly immobilized. In his experiments on animals, the fragments were fixed by bone or metallic pegs, and a plaster-of-Paris dressing applied, including the pelvis and both extremities. When the operation was performed with strict aseptic precautions, bony union, or union by short ligament, was the rule. A reason given why it is impossible for bony union to take place, is, that the upper fragment is not nourished sufficiently,—that the separated head has no blood supply, and therefore it cannot unite to the neck.

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*Read before the Hennepin County Medical Society, January 6, 1902.

Senn says: "In intracapsular fracture all conditions are present for the necessary production of intermediate callus, provided the fragments are kept in contact long enough. The vessels in the red marrow, according to recent observations, are admirably adapted to establish early and free collateral circulation. The interrupted circulation could readily be restored through direct contact of the severed vessels. In 1869, Hoyer made the discovery that the small veins in the red marrow are without walls, their lumina being bounded by the parenchyma of the marrow. Most of the capillaries are also without walls."

Again, Senn says: "If the upper fragments were not nourished from some source, they would more frequently disappear from absorption, suffer necrosis, and act as a foreign body." The ligamentum teres conveys a small branch of the obturator artery to the head of the femur. Perhaps collateral circulation is established through this ligament. Senn has tabulated fifty-five specimens of bony union after intracapsular fracture, all well authenticated cases and diagnosis verified by post-mortem examinations.

Chorley's specimen, described by Jonathan Hutchinson, is pronounced by him one of the best examples of bony union in intracapsular fracture. This specimen is in the posession of Leeds' Hospital Museum. Transverse fracture is wholly within the capsule, and nowhere more than one-half inch from the articular head. The specimen is from the body of a man seventy years old, whom Chorley attended several years before death, for fracture of the neck of the femur. The patient walked well with a stick.

There can be no doubt in the mind of anyone who will take the trouble to thoroughly investigate the subject of intracapsular fracture that bony union does occur, and I believe it would occur as a rule, if only the proper methods of treatment were carried out. When it does not occur, the fault is more often with the attending surgeon rather than due to any physical imperfection which may be said to exist in the patient.

Fractures unite quite as readily in old people as in young. I can state this as true upon considerable experience in the treatment of a large number of fractures of all varieties, in old people. Wounds of the soft parts heal in old people as readily as in young. Age is no predisposition against bony union. A fracture at the neck of the femur is no different from a fracture elsewhere, and no more difficult to treat, when once understood.

Sir Astley Cooper classified fractures of the neck of the femur into intracapsular and extracapsular, and added a third variety, partly within and partly without, which he called mixed fractures. This classification has been improved upon, and the division into impacted and unimpacted is better. Diagnosis of fracture of the femoral neck can usually be determined without much difficulty. Fracture of the neck of the femur may occur in children, is not uncommon in adults, but usually does not happen before the age of fifty, and is more common after sixty. Women are more liable than men, especially to a fracture within the capsule.

Royal Whitman says ("Annals of Surgery," Feb., 1900) that injuries of the neck of the femur in children under ten are fractures, and that not until the age of puberty is the epiphysis sufficient of an entity to be separated.

Rodet, in his experiments on fractures and plaster-of-Paris casts of the upper extremity of this bone, has demonstrated the important fact that the situation and direction of a fracture of the neck of the femur may be predicted to almost a certainty from knowledge of the direction of the force which was applied. Thus, a force acting vertically produces an oblique intracapsular fracture; a force acting from before backward, a transverse intracapsular fracture; one from behind forward, a fracture partly within and partly without the capsule; force applied transversely, a fracture entirely without the capsule.

There are many reasons given why this accident is more common to old age. I think too much stress is laid upon senile osteoporosis affecting this particular bone. The femoral neck is subject to more strains and injuries than any other bone in the body; and when we consider this we see how seldom it is fractured. The bone does not break because of any selective weakness in the neck, but being taken at a disadvantage and given a particular kind of a snap, it breaks. Degeneration is not greater here than in other bones of the body.

Another reason given why the neck weakens is because of the change in it from an oblique to nearly a right angle. Prof. Humphrey states that so far as his observation the change is the exception rather than the rule. Granting that this change in the femoral neck does take place in old people, it has no weight in accounting for fractures, for most fractures of the neck are produced by falls upon the trochanter, and the force is in the direction of the axis of the neck, and the more nearly the neck of the femur is at right angles to the shaft, the better mechanical advantage it has to resist a fracture occurring in this way. Desault examined thirty cases of fracture of the neck to determine the exciting cause, and he found twenty-four produced by a fall upon the trochanter major.

Various predisposing reasons are generally given for a fracture of the femoral neck, but they are not supported by sufficient evidence. A fracture here is only susceptible to the same influences that affect a fracture in other parts of the body. The neck of the femur breaks oftener in old people, because it is exposed more frequently to violence. The percentage of fracture of other bones in old people would be greater if exposed as frequently as the hip-joint. Old people are prone to stumble and fall, and a fall is usually the exciting cause of the accident.

The recovery and future degree of usefulness will depend upon a correct diagnosis. If the fracture is impacted, any attempt at diagnosis by manipulating the limb will likely prove disastrous. The signs, whether intracapsular or extracapsular, are practically the same. It is very important to determine, if possible, whether there is an impaction. Dr. Ridlon, of Chicago, calls attention to the fact that "The whole of the neck down to the intertrochanteric line, is within the capsule in front, and nearly all of it is included at the back of the bone, and a fracture that is not partly or wholly within the capsule must be beyond the intertrochanteric line and consequently not a fracture of the neck at all."

If a person of advanced years has received a fall or trip, and is immediately disabled with shortening and eversion of the same limb, with slight fullness over the groin, with pain and tenderness over the trochanter, a fracture of the neck can almost of a certainty be said to exist.

To determine the position of the trochanter, Bryant's triangle has the preference over Nelaton's line, for the former can be used without turning the patient over on the sound side at the risk of disturbing the fragments. It would seem to-day that no man could be found who would look for crepitus as a sign of fracture. Unfortunately one of the first things some practitioners do when called to a case of injury where they suspect a fracture is to take hold of the limb and manipulate it in an effort to get crepitus. Bryant used to say in his class: "Show me a man who looks for crepitus, and I will show you a man who is not a surgeon."

Post said: "The surgeon in his anxiety to obtain a perfect diagnosis, moves the limb freely in all directions—he overcomes the impaction, ruptures the cervical ligaments, demonstrates beyond a doubt the existence of a fracture and effectually destroys all hope of union. For my part, I prefer an imperfect diagnosis for the surgeon and a perfect limb for the patient, rather than a perfect diagnosis for the surgeon and a useless limb for the patient."

When a diagnosis cannot be made, but all signs point to a fracture of the neck, it is better to err on the side of safety, and treat the case as one of fracture. Where advantage can be taken of the *x*-ray it should be used, for we have in it a most valuable means for determining the conditions in all cases of fracture.

Other signs are the puckering of the integument over the patella if shortening is considerable, and the relaxation of the fascia lata between the ilium and the trochanter major. Dr. J. Clark Stewart called my attention to a sign which he says can, as a rule, be depended upon. It is this: "If there is a fracture of the neck of the femur, the patient cannot raise the leg from the bed without bending the knee." It is well known that a patient with an impacted fracture can sometimes walk for a considerable distance. I remember that Prof. Wyeth, at the Post-Graduate School, told his class that a man presented himself at his Clinic, having walked there and to his home. Upon examination he thought there existed only a contusion to the joint. Some weeks later he was called to see the man at his home and found him in a helpless condition, the limb shortened two inches or more and everted. An impacted fracture had been converted into an unimpacted.

Dr. Chas. Locke Scudder says: "The impacted fractures will unite, the unimpacted may unite, slight shortening with little deformity, some limitations in the movements of the hip, a limp may follow, but a fairly useful limb is to be hoped for." Dr. Ridlon, of Chicago, says: "In all cases a strong and useful limb in good position may be confidently anticipated, as in any other fracture of this bone or any other bone."

You will observe that Dr. Scudder's views are more conservative than Dr. Ridlon's and more in line with earlier teachings.

Prof. R. W. Smith holds that all extracapsular fractures are, in the first instance, impacted fractures, and Bryant states that he agrees with this view, adding that "Many so-called intracapsular and all mixed forms are primarily of a like kind." In incomplete fractures, Stimson says: "The line of fracture is transverse and upon the concave side, and is produced by crushing, not by overbending." There is little deformity attending this fracture, and it is often mistaken for a contusion of the hip. When the injury to the hip has been severe, it is wise to treat the case as one would treat a fracture.

Before a patient is moved from the place of accident, some dressing should be applied which will hold the parts at rest. It is essential to have a good firm bed, with a smooth mattress, a thing not always at hand in the home. The bed should be placed in a sunny room, and so located that the patient can be reached on either side. If the fracture is impacted, the deformity should not be corrected, and no extension is required. There are numerous mechanical appliances for this injury, but the best splint is the one that holds the fragments in position, and as nearly as possible immobilizes the joint, with the least discomfort to the patient.

Buck's extension with a Hamilton's long splint, supplemented with sand-bags, is perhaps more frequently used than any other dressing, and the reports from men who use this dressing are divided as to its value. I think most surgeons will agree that it is a very unsatisfactory appliance in treating fractures of the hip-joint.

Dr. Gillette reports four cases where he employed the conventional Buck's extension and Hamilton's long splint, and met with complete failure in all but one. One objection the doctor had to the Hamilton splint was that the splint was on all sides of the patient at all times of the day and night, and that it could not be adjusted properly to the limb, and I believe every man who uses this splint will have a like experience.

In a case, not only of a fracture of the neck, but of the middle third of the thigh, where he used the long extension splint, suggested by Dr. Schaffer, Dr. Gillette met with success as regards union. "The extension is made by adhesive straps attached by buckles to the footpiece of the brace, and the counter-extension by perineal straps. Extension can be made until the fractured ends are brought in apposition by the use of the ratchet and key to extend the leg. It is still more firmly fixed by the abduction of the leg and the surcingle about the pelvis, making lateral pressure over the trochanter major. There is no occasion to guess at the amount of extension necessary, as we do with Buck's extension. In the long traction hip-splint, when the fracture is reduced you have sufficient extension and it can be locked there." Senn claims that "The best dressing to accomplish permanent fixation is a plaster-of-Paris bandage. To insure complete immobility of the hip-joint, the bandage must include the injured limb from the toes upward, the entire pelvis, and the sound limb from the pelvis to, at least, as far as the knee. With the fenestrated plaster-of-Paris splint, pressure can be applied directly over the trochanter major by placing a well cushioned pad, with a stiff, unyielding back, corresponding in size to the fenestrum in the opening in the splint, and applying the necessary amount of pressure by means of a tourniquet or some other similar contrivance; or by incorporating a splint in the plaster dressing, the lateral pressure being regulated from day to day by moving a set-screw, which rests in the center of the pad."

My experience with plaster-of-Paris is that it is a most unsatisfactory dressing for this fracture, inasmuch as the patient is made uncomfortable beyond endurance. It is cruel to encase an old person in such an extensive plaster cast. I have used it for the last time in a fracture of the thigh bone. In an old woman, fifty-seven years old, treated at St. Barnabas Hospital a couple of years ago, I did my best to give the plaster dressing another trial. After two or three days of torture, the patient begged me to remove it, for she said death would be preferable to a continuance of the cast. The dressing becomes soiled from the use of the bed pan, it is impossible to bathe the patient, to massage or render any other attention that is so restful to a person confined to bed. I can hardly understand how such an excellent authority as Dr. Senn so strongly recommends this dressing. I am aware that few men know how to put on a plaster cast, but I think in the case I mention there was no fault in its application. Theoretically it would seem to be just the thing for this fracture, but, practically, it is inferior to other dressings, and I believe has nothing to commend it.

Dr. Ridlon says of the Senn method: "If there is no displacement of the fragments, or if the fragments could surely be replaced with end to end apposition, the screw-pressure pad would help to immobilize the fracture, if the pressure could be borne. The screw-pressure pad was devised before the Roentgen photograph had given us accurate knowledge of the relations of the fragments."

Any surgeon who possesses sufficient mechanical skill may be able to devise his own form of splint. All that is necessary is to keep in mind two things, namely, the apposition of the fragments and the immobilization of the joint. In some very old and infirm people, all that can be done is to make them comfortable. A long confinement in bed exhausts the patient's strength, and if it is advisable to get the patient out of doors into the fresh air some form of wire cuirass, or Hennequin's modification of it, may be used.

I saw, in consultation, the mother of a doctor about a year ago, who was ninety-four years old. She sustained a fracture of the thigh bone, and because of her advanced years no effort was made to treat the injury, but to make her comfortable while she lived. She died three or four weeks after the accident.

The Thomas splint, as described by Dr. Ridlon, "secures posterior support to the fracture, gives fixation without compression of the fractured region, except posteriorly, allows the patient to be lifted with ease, does not interfere with the groin, favors cleanliness, admits fixative traction, and can be applied without moving the patient and without assistance. It consists of a main stem, a chest band, a thigh band and a calf band, and reaches from the axilla to the calf of the leg."

This splint, or some modification of it, meets all indications as well as, if not better than, any other appliance I know of. Lateral pressure is secured by a pelvic bandage with a pad over the trochanter. A sand-bag should be laid under the trochanter, to assist in preventing eversion of the limb. When it is generally accepted that bony union in a fracture of the neck of the femur will take place, and that it depends more largely upon the efforts of the surgeon whether such a result is obtained or not, greater care will be exercised to secure apposition and maintain it. A failure to do so will make the surgeon responsible for being derelict in his duty to the patient.

If the best efforts have failed to secure union by mechanical appliance, an operation is to be considered. Where the patient is not too old, and the health is fairly good, an operation is justifiable. Statistics, so far as they go, favor an operation. Langenbeck was the first to operate for non-union. His case resulted in failure because it was before the days of aseptic surgery. Lister and Koenig followed him, and both their cases were successful under aseptic precautions.

The report of Dr. Gillette shows three successful cases, operated on by Dr. Boeckman. In these cases "The trochanter major and its muscular attachments were turned back, exposing the capsule of the joint. A longitudinal incision was made in the capsule, showing the line of fracture in the neck of the femur. The surfaces of the fractured ends were denuded and a bone-peg was driven through the neck of the femur, thus holding the fractured ends together. The capsule was then stitched with catgut, and the trochanter major was nailed with a small bone-peg back to its original position. The skin and fascia flap were sutured and a fixed dressing applied."

DISCUSSION

Reported by Dr. A. E. Benjamin, Secretary of the Hennepin County Medical Society.

Dr. C. G. Weston opened the discussion of the paper. Dr. Weston said:

Dr. Rochford has been very happy in his choice of a subject, and we very fortunate in hearing his exposition of it. Certainly no subject of greater importance or of more general interest could have been selected. It is one in which the general practitioner is as interested as the surgeon, for it is to him that most of the cases fall, and since the authorities are nearly unanimous in stating that bony union and useful legs are not to be expected to result from the treatment of fractures of the hip, if these be intracapsular, why should not he treat them as well as the surgeon. With regard to the form and structure of the femoral neck in the aged, many of you may have seen the specimen shown by Dr. Ruth at the recent meeting of the American Medical Association, in St. Paul, as an example of bony union occuring in an old man, who is said to have had an intracapsular fracture of the femoral neck at 72, and to have died at 90. The bone in question presented no differences in form and general appearance from that of the femur of a young adult, and indeed I could see no evidences of a fracture having occurred.

Dr. Bernays, of St. Louis, in discussing the case, intimated that upon first seeing the specimen some months previously, he had doubted that the bone could have come from a man 90 years of age. Since then, however, he had convinced himself by examining the femurs of two old men who had died at the St. Louis poor farm, both over 80 years old, that the specimen was genuine, so far as the age of the patient was concerned. Of the sign mentioned by Dr. Rochford as having been given him by Dr. Stewart, I would say that I have employed it for some years and consider it a very valuable one. If the extended leg can be raised so that the foot leaves the bed the knee remaining straight, non-impacted fracture of the femoral neck can be excluded. Inability to do so, however, does not have equal weight in determining the presence of fracture, as this may be the case also in some cases of contusion and dislocation. One important thing to be borne in mind in making a diagnosis is that shortening is not always present right after the accident, but may develop later. I have at least two cases in mind, where no shortening was found, and a diagnosis of sprain made, and subsequently over two and one-half inches of shortening developed. When in doubt about the diagnosis in the case of an injury to the hip in an old person, err upon the safe side and make a probable diagnosis of fracture. Ruth's method of treatment is Buck's extension, with a lateral extension so applied from the upper part of the thigh as to overcome the tendency to eversion. He claims that one of the principal reasons for non-union is the fact that the tendon of the psoas and iliacus muscle is drawn in between the ends of the fragments when the capsule is torn off, or, if the latter is intact, it is relaxed and may be pressed in between the fractured parts by this ligament. To avoid this he reduces the fracture by extension of the thigh at right angles with the body, which brings the tendon of the psoas and iliacus away from the femoral neck, and while an assistant makes traction outward, slightly upward and forward, the leg is brought down to the line of the trunk, and the permanent extension in these two directions is applied by means of weights and pulleys. Counter-extension is secured by raising the foot and side of the bed. He reports 25 cases treated in this way by various men with failure in but three. All the rest had functionally good results with shortening varying from nil to one inch, truly a remarkable record. I heartily indorse Dr. Rochford's position that, in suitable cases where mechanical treatment has failed, operation should be done as in Dr. Gillette's cases. If men like Thomas and Senn and Ridlon and Shaffer claim from mechanical treatment of fracture of the femoral neck results as good as can usually be obtained from the treatment of other parts of the femur when fractured, and if Boeckman and Gillette and the writer of this paper can secure results from operation comparable with those of operations upon ununited fractures of other parts, there is something in it worthy of our attention and study at least, and probably of our imitation.

Dr. Law wished to report a case of a soldier, 25 years old, who had been shot by a Remington brass-coated bullet, the bullet lodging in the neck of the right femur, which was extensively comminuted. The bullet was removed with a lion-jawed forceps. A plaster-of-Paris splint was used, extension and counter-extension, with patient lying on a pneumatic mattress. Surgeons who saw this case were surprised at the results obtained. There was only three-fourths of an inch shortening, and the man has a useful limb.

Dr. R. E. Cutts said: I have had good results with the plaster-of-Paris dressing from the ankle to the umbilicus. In old people, where this is applicable, I think it should be used, as it permits them to be moved about. I noticed recently while at Gibney's Clinic, at the Hospital for the Ruptured and Crippled, N. Y., that in applying casts for the fixation of the hip the bandages are reversed back and forth across the abdomen, building the case up an inch in thickness, and then before the case has time to harden, trimming it out freely around the genitals, removing a large elliptical section, covering the abdomen, thus leaving a space about one and one-half inches wide covering the pubis.

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Dr. J. H. Dunn continued the discussion as follows:

Since my first experience as a witness in a malpractice case in regard to a fracture treated by a bone-setter, over twenty years ago, I have observed a number of such suits, but recall few in which the facts or the testimony seemed to have had much to do with the verdict. So far as the laws and the courts permit, the jurors incline to decide mainly in accord with their prejudices and sympathies. The chief endeavor of the prosecution is to use some poor fool of a doctor, if a sufficiently knavish one cannot be found, to admit just enough largely irrelevant, hypothetical nonsense to get his case to the jury, and confidently expects it to do the rest.

The higher courts usually reverse unjust verdicts, and the prosecuting attorneys pretend to fancy that the doctors all lie together, and are nearly as corrupt as the supreme judges! Such accusations do us great credit. If, after eliminating a few nobodies and Ishmaelites, the vast majority of our profession can be regarded by some attorneys as being as rotten as the Supreme Court, we ought to feel flattered. The chief error of some doctors is in allowing a smooth shyster to entrap them into doing his dirty work. It is not so much what the doctor for the plaintiff testifies to, though a feeble-minded or obstinate medical cuss in the witness-factory of a damage lawyer often proves unfair enough, as it is the base uses to which an attorney puts an intentionally fair witness—viz., to adroitly extract from him the appearance of *some* evidence, however small by which he may technically get to his beloved jury. Therefore, the wise physician makes it a rule never to be pulled into the prosecution of these cases except by subpœna. Then he should be very careful to tell only the truth and what he knows to be the truth, and beware of hypothetical questions. In the abstract the law is very just and liberal to physicians, but its practice is so far from its ideals that the best and most careful practitioners are often persecuted most cruelly. A doctor who will lend aid to such nefarious practices is, and of right ought to be, regarded as worse than a plain criminal: he is a criminal fool.

The second cause for trouble which was especially apparent to me in a recent case is the extreme views and assertions of enthusiastic writers upon various treatments for fractures. Modern medical literature is very largely "hot stuff." If one were to be tried by some recent authorities he would certainly be condemned whatever he did or did not. Voluminous and interesting writers rarely limit themselves with absolute truth. These wild assertions are carefully picked out by attorneys and used for all they are worth. For example, the reader of the paper has quoted some of these characteristically modern assertions—implying that with proper treatment an intercapsular fracture can be healed as well as any other fracture.

Now this assertion is all right or all wrong, according to the interpretation given it. When a man writes a good journal article he is often emphasizing certain points largely, and must not be taken too literally. A large portion of this kind of literature is found, sooner or later, to be of no practical value. If the text-books are a little behind the times, it must not be forgotten that the up-to-date literature is often so far ahead of the times as to be well on the way back around the circle about which medical opinions notoriously oscillate. The man who testifies or practices mainly upon what he reads, rather than from broad experience, is apt to be more positive than just or correct. Dr. Rochford's contention that everything practicable should be done to secure good union in intracapsular fractures, cannot be too strongly commended. To neglect careful treatment of a fracture because it is intracapsular would be most reprehensible. In some cases, on account of the age and condition of the patient, it is not practicable to do much in the way of fixation and retention. But no good surgeon, I think, treats these fractures as a routine in this expectant way. Any one of much experience must find that no one method is applicable to all cases. The plaster-of-Paris dressing mentioned is excellent and most practicable in certain cases, but in others it is worse than death, as the doctor's patient declared. I much like for many cases the hip-splint as advocated by Ridlon.

Doubtless something may be said for operative interference in rare cases, but I think we can scarcely be too conservative in this respect. The doctor remarked that surgeons have been too busy in the abdomen to devote sufficient attention to this matter. Probably fortunately so, for at least fifteen years ago I maintained that the peritoneum, then thought by many to be the most vulnerable of tissues, was, under some conditions, more capable of managing limited infection and more friendly to the surgeon than almost any other tissue. The large joints, however, are quite different. In no region is disaster more liable to follow even under the most rigid technique. The best asepsis is only approximate. Statistics are always kind to the young. It should never be forgotten that occasionally bad results follow any and all methods of treating fractures, and that even illiterate bone-setters get astonishingly good results occasionally, which is but to say that there are some factors in the healing of fractures over which the healer has little control.

Dr. Kelsey reported a case of an old man who fell off of a load of hay. He was very restless nights. A plaster cast was applied, and he was able to hobble about somewhat. It seemed to the doctor like a fracture, but he was unable to say what the result would be. He did not think we could exclude the use of plaster for some of these cases.

Dr. Erdmann gave an explanation of why Dr. J. Clark Stewart's sign of a fracture of the neck is of importance. He said:

I wish only to state that the sign referred to in the paper as Stewart's sign is easily explained, when we understand the anatomical changes which take place in fracture of the neck of the femur. Extension of the leg upon the thigh is performed by the quadriceps extensor of which the rectus portion is attached above the pelvis anteriorly. Flexion of the thigh is performed by the iliopsoas which is attached above the pelvis posteriorly. Both muscles thus pass over the hip-joint, the first muscles acting on the principle of a lever of the first order, the second on that of the thrid order. In fracture of the neck, the normal fulcrum of the levers is displaced, hence these muscles cannot act as before. I, too, listened with great interest to Dr. Ruth's paper at the meeting of the A. M. A. last June, and the points upon which he based his diagnosis and treatment, I thought well taken, since they are based upon the anatomy of the hip-joint, i. e., the action of the muscles surrounding the joint. When we remember that there are no less than twenty muscles acting upon this joint, it is not strange that results in the treatment should vary. To my way of thinking no medical man ought to be considered competent to treat fracture of the femur, without a thorough familiarity with the anatomy of the parts.

Dr. Sweetser thought the operation of Dr. Watson Cheyne was more simple than the operation of Dr. Boeckman, as it was unnecessary to remove the trochanter. By having the patient lie flat on his back, and comparing the injured limb with the other one, placing it in the same position, pulling it down to the same length as the limb on the other side, a nail can then be driven into the head of the bone without disturbing the joint, and then Buck's extension can be put on. He thought there was little danger of infection, and also that repair does take place in old people. He said an ambulatory pneumatic splint is good, but expensive.

Dr. Rochford, in closing the discussion, wished to acknowledge the kindness of Dr. A. J. Ames in making the drawings which he had to illustrate this paper. He thought the case that Dr. Law reported illustrated the benefits derived from operative procedure. It was a unique case, and was an argument in favor of an operation. Except in very old and infirm individuals, he thought the shock in operating upon the hip-joint was very little, and if the surgeon were clean the results would be satisfactory. In individuals, up to the age of sixty-five, where non-union was present, and there were no other contraindications for operation, he thought surgical treatment should be given them, and said that reports are quite favorable from men who operate upon these cases. In his opinion, no man should treat fractures of this sort, or any other fracture, who had not mechanical skill enough to make and apply his own splint, and was able to bring into use any material that was at hand. The Thomas splint, or Ridlon's modification of it, is, in his opinion, an excellent one for these cases. He thought that in cases of children plaster-of-Paris is one of the best dressings.

Dr. Rochford further said that he did not intend to mention the case which Mr. Larrabee had brought up, but inasmuch as Mr. Larrabee had referred to it, he thought it might be of interest to hear it. A woman about fifty years old sued the Milwaukee Railway Company for $25,000 damages, and the case was tried in the United States court, in a neighboring city a few months ago. Dr. Rochford was present as a witness.

It was claimed on the part of the injured woman that she fell over some baggage on the station platform, and fractured the neck of the thigh bone. Dr. Rochford made an examination of her about nine months after the accident, and at that time found no external signs of injury. When he attempted to manipulate the limb, she did not let it move freely, but still he could flex it at nearly right angles to the body. She said she was a Christian Scientist, and that, according to Christian Science, she did not suffer any pain, but in another sense she suffered a great deal of pain in the hip-joint. When asked by the doctor how he should report, whether from the Christian Scientist's or an ordinary medical standpoint, she said that in a matter like this, she felt that she was suffering severe pain. The doctor reminded her that this was important, as there were no other indications of injury.

About two years from date of injury her case came to trial, and Dr. Rochford heard for the first time that she claimed to have sustained a fracture of the neck of the femur. One of the curious features about this case was the medical expert testimony. The woman's testimony was that the only time when she did not bear her weight on the leg was while she was being helped from the place where she fell, into the waiting-room; that even then she was not carried, but assisted; and that she was at no time confined to bed, and was always able to walk without a cane or crutch. She claimed to be a woman of great will power, and attributed her ability to get around largely to this. She had not employed a physician to treat or examine her until the time she made claim for damages, and then only for the purpose of obtaining medical testimony in court. Dr. Rochford and two other physicians examined her on the day of the trial in the presence of three of her medical witnesses. The only objective sign of injury was an apparent shortening of the limb, the pelvis being tilted up. Upon the most careful examination, with the patient stripped and lying down, the physicians discovered no shortening. Measuring from the spinous process of the ilium to the margin of the malleolus, neither Bryant's triangle nor Nelaton's line showed any displacement of the trochanter, and when her mind was diverted from her trouble, the limb could be manipulated more freely. She said she was a Christian Scientist, and had no confidence in medical men, and did not employ one. One of the men to testify for her—a man at the head of his profession—swore that there was one inch or more shortening, and that in his opinion she had undoubtedly sustained a fracture of the bone; that her crippled condition would not improve, though there would be some improvement in the amount of pain she suffered; and that she would remain a cripple all of her life.

"Now," said Dr. Rocheford, "I do not wish to be misunderstood, for it is not my purpose in citing this case to cast the least reflection on any man who testified on the other side, but here was a case that I feel absolutely certain did not have a fracture. So, you see, men equally honest will sometimes differ where it seems impossible for a disagreement.

A verdict was given for the defendant.

HUMAN AND COW'S MILK

Another marked difference between human and cow's milk is found in the condition of the phosphorus element. In the cow's milk the phosphorus exists mainly in the form of inorganic (mineral) compounds; in the human milk they exist in organic (animal) combinations. It is well known that the inorganic compounds are practically nonassimilable, while the organic compounds are readily taken up by the human system. —Boston Med. and Surg. Jour.

A CASE OF CEREBELLAR HEMORRHAGE

By Lester W. Day, M. D.

MINNEAPOLIS

Betwen the years 1880 and 1895 Krauss collected 100 cases of cerebellar diseases in which the diagnosis was verified by the necropsy. In only one of these cases was the lesion due to a hemorrhage. Since 1895 I have found eight or ten cases referred to, and should like to add another to the list.

Mrs. Elizabeth S—— consulted me for the first time two years ago, complaining of a general weakness and dizziness. The history given at that time was as follows:

Family history, good. Personal history: Patient was always well and strong until 1889, when she had typhoid fever. Since then she has never been strong, and has been subject to frequent headaches located at the vault of the cranium. In 1895 she had nervous prostration. No history of syphilis or alcoholism. She has always been obliged to get up at night to urinate. Her daughter says her memory is poor, and mind easily confused.

Marital history: Eight children, the youngest 13; no miscarriages; labors uneventful.

Present history: She complains of general weakness, and dizziness, followed by an attack of vomiting and purging.

Physical examination: A small, poorly nourished woman; lips and mucous membrane rather pale; tongue coated; pulse regular, of good volume, and moderately compressible; heart and lungs negative; abdomen negative.

Urinary examination showed a low sp. gr., a slight trace of albumen, and a few hyaline casts. In June, 1901, she called, complaining of dizziness and occasional headache. Her general condition was about the same as when examined previously.

On September 4, 1901, about 8 p. m., after a day that resembled every other, she came in from the kitchen holding her head in apparent agony, and asked for Pond's Extract. She had often complained of headache in the vault of the cranium. In a few minutes she complained of nausea, and went into the bathroom. After profuse vomiting her daughter assisted her into bed, but in a few minutes she asked to be helped back to the bathroom. By this time she was so exhausted that she could not walk, but got down on her hands and knees and crawled. She had to rest several times. On reaching the bathroom her daughter propped her against the tub, resting her head on a pillow. Soon, however, she allowed herself to slide down upon the floor. Her daughter was unable to move her, as she lay perfectly limp. She complained that the slightest touch hurt her. She was perfectly rational and could give orders to her daughters, the other two having arrived about 9 p. m. Because both upper and lower dentures were out of her mouth, the daughters did not know whether or not her speech was more indistinct than usual.

They helped her to bed and summoned me, but as I was out of the city, Dr. —— called in the emergency, arriving about 9:30 p. m. After an examination he assured the family that there was not much the matter, and that their mother would be well by morning. He left some 1-10 gr. calomel pills, one to be given every hour, and a migraine tablet for the headache. The patient was very restless and tossed about, throwing the bedclothes off. About midnight she quieted down, and her daughter thought she had gone to sleep. About 6 a. m. she was found dead in bed.

The post mortem was performed at 5 p. m. The lungs were somewhat congested. The heart was normal, and the valves and aorta were apparently not sclerosed. The kidneys were small, capsule slightly adherent; cortex somewhat contracted; skull adherent at vertex over an area about the size of a dime, and the membrane at that point was thickened, thus accounting for the frequent headaches at the vault of the cranium. On removing the brain a large clot was seen protruding from the lacerated cerebellum. The cerebellum was torn across, and was divided by the clot into an upper and lower half, the tear passing through the right, left and middle lobes, but not opening into the fourth ventricle. On examining the arteries of the brain, numerous small, sclerosed patches were found, and it was unquestionably from one of these sclerosed patches that the hemorrhage occurred.

The interesting points about the case are:

1. That there was no paralysis, but a profound weakness, possibly the result of the severe vomiting.
2. Mind not affected.
3. Speech apparently not affected.
4. Difficulty of diagnosis.

AN INTERESTING CASE

By G. H. Mesker, M. D.

OLIVIA, MINN.

Mr. M. J——, aged 50 years, strong, healthy, hard worker, in the implement business. On May 30th he worked hard all day. On the evening of May 31st he felt sick, and did not go out to work; had some pain in the region of the stomach. Toward evening the pains became worse, and I saw him at 6 p. m. He was seated on a chair, and had just had quite severe pain of a colicky nature. On examination I found nothing of importance; temperature was normal; pulse slightly exhilarated; no distension of abdomen; no tenderness over McBurney's point; tongue clean; bowels had moved slightly that day; patient was somewhat nervous (he was of a very nervous temperament). He then said that he was subject to attacks of "stomach cramps." I gave him a hypodermic of ¼ grain morph. sulph.

I was again called that night at 11:30. He then complained of very severe pain over the lower lobe of the right lung, and coughed slightly. I could not detect anything wrong with the lung, or the plura. I put some warm stupes on him and he rested quite easy the remainder of the night. Dr. F. L. Puffer, of Bird Island, incidentally saw the patient with me the next morning, and could not discover anything seriously wrong. He still complained of indefinite pains over the abdomen, but had no temperature. I then gave him some cascara, but his bowels did not move after taking several doses, so I gave him an s. s. enema several times, when a little fecal matter came away. He vomited some, and was uneasy. His condition remained the same until Thursday morning, June 6th, when he said: "I have some pain on the left side, under the ribs (over the spleen); it feels like wind pressing. I believe if you will give me an enema of water it will move." He was apparently correct, so I gave him the enema. He passed it off, and the pain left. He got up, dressed, and was up all day, and took nourishment. The next morning, Friday, June 7th, they called me about 4 o'clock. When I reached the house his wife and daughter were sitting on the bed trying to keep him in bed. He was apparently delirious. His wife was very solicitous about his wants, and I thought she had worked him up to that state of nervousness. I requested her to leave him, saying that I would see what the trouble was. I sat down on the bed beside him and talked to him. In less than ten minutes he was fast asleep, breathing regularly and free. I remained at the house over an hour. He continued to sleep, and was asleep when I left. I had not gone over two blocks when I was called back. When I reached the house the patient was dead. He did not wake up out of the sleep. All that was noticed by those present in the room was that the interval between the last two inhalations was rather long.

An autopsy could not be obtained. What was the cause of death? He had no discernible heart lesion, as I examined his heart when he complained of the pain in his right lung.

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THE LITERATURE OF NEUROTICS

Sir Lauder Brunton discusses, in the columns of Nature, fairies, apparitions, visions and hallucinations from a neuropathic standpoint. He believes that apparitions are due to abnormal conditions of certain sense-organs, such as exist in epilepsy, migraine and similar disorders. The zig-zag color-schemes and disturbed vision that accompany diseases of this type are enough to account for the stories, fancies and sketches that appeal to those of vivid imagination. The author suggests that Dante and Doré were the victims of migraine, that Mohammed had visions, tremors and convulsions, and that it was curious to speculate how different might have been the course of the world's history if the prophet had been thoroughly dosed with bromide of potassium.

Sir Brunton might have gone further in his suggestions in advising that a horde of neurotic writers of the present day would confer a favor upon the human family if they would consent to be bromidized into a demented state, chloroformed into permanent coma, or had their brains trephined with an axe.

FIRE AT THE STATE UNIVERSITY

The new anatomical building of the State University, occupied for a little more than a year, was destroyed by fire Saturday, January 25. The origin of the fire is uncertain. The flames, however, communicated with a barrel of gasoline, which exploded, blowing out the windows and spreading the fire with great rapidity.

Although the property loss is not great, the fire is a misfortune. It will necessitate the crowding of students into the main medical building, and no repairs can be undertaken for some time on account of the weather and also on account of the uncertainty as to which board is to be paramount in University matters. The Board of Control feel that they should dictate and the board of regents are in doubt as to which course to pursue.

No definite action will be determined until the meeting of the legislature when it is hoped the representatives will more clearly define the duties of each. Meanwhile quarters will be provided for the students and, but little delay will be experienced.

The greatest loss is the destruction of anatomical preparations and the museum specimens, which cannot be at once replaced, if at all.

INFLUENCE OF UNSEASONABLE WEATHER UPON HEALTH

During the months of December and January of the present winter the sun has shone almost daily in Minnesota. The temperature for six weeks has not reached the zero point. For many consecutive days the thermometer has ranged above the freezing-point, and the light snows or frosts have rapidly disappeared under the sun's rays. During this period there has been much sickness of various kinds. There have been reported a limited number of pneumonias, a larger number of cases of bronchitis and a greater number of all undefinable diseases or symptoms that suggest an atmospheric condition that is unseasonable.

These diseases begin suddenly like an ordinary cold with coughs, pains, aches, sore throat and a moderate temperature. The symptoms run a short course and subside, leaving behind them a persistent cough with no demonstrable physical signs. Others show a sudden onset of pains, generally distributed and accompanied by exhaustion and malaise. The larger group are those who suffer from pains, nervous irritability, hyperasthesias, and pain over the nerve-trunks with no fever; and they convalesce slowly.

In Hennepin county there has been an unusually large number of cases of insanity among the degenerative classes, manifested in a sudden outbreak of violence or other manifestations of nerve-storms. That a large number of insanities should develop at this season cannot be ascribed to the influence of the season alone. Doubtless other factors contribute to their presence. In all probability they are co-incidental cases, yet from the presence of so many neuroses of the milder types it is fair to presume that unseasonable weather and the activity of some atmospheric infection, which seems to expend its force upon the nervous system, are an important element that will bear investigation.

The infection, whatever it be, is in some way responsible for a large number of deaths among elderly people or those who suffer from organic diseases, like chronic nephritis, arterial and heart lesions.

Minnesota has always borne a reputation for a health-giving climate, and to maintain that reputation the state must revert to the good old-fashioned winter with plenty of snow to bury the germs of disease and a low temperature to discourage their visiting propensities.

As if to demonstrate her old-fashionedness, at the time this is written winter has arrived with its snows and sleigh-bells, under-zero mercury and a high wind, enough to satisfy the oldest inhabitant and restore the populace to health and happiness.

HAY-FEVER

The etiology of hay-fever will bear discussion in spite of means and remedies for the cure or relief of this recurrent malady. The supposition that the pollen of certain plants is the usual exciting factor in an attack is not well maintained. Recent experiments have shown that temporary irritability of the mucous membrane has resulted from the introduction of unusual quantities of the pollen. Attempts to immunize patients by saturating them with fluid extract of rag-weed have shown the uselessness of such procedure. Heymann and Matzuschita have observed that the number of streptococci in the nasal secretion of hay-fever patients greatly exceeds that of the secretion of normal persons. These investigators have been able to obtain pure culture of streptococci from the nasal secretions of hay-feverites.

With the unreliability of the pollen theory and the possibility of bacterial poisons as the exciting cause, the etiology of hay-fever may be viewed from a different standpoint. From whatever point of view of the exciting cause, the foundation of all such diseases must be sought in the nervous system.

The majority of hay-fever sufferers are neurotics. A careful tracing of their history will demonstrate an underlying defect, usually inherited or occasionally acquired, from unstable ancestors, or accidents occurring during the growth or development of the individual.

When one calmly considers the possibility of errors that distort the functions of nerve cells and the accompanying disturbances that arise in other tissues; the formation of unfortunate habits in the growth of the nerve unit in individuals predisposed to nervous instability; and the frequent nerve-storms that come unexpectedly from trifling causes, it seems unjust to claim a peripheral irritant as the important element in hay-fever. True, it may be, in a limited number of cases an hypertrophied membrane acts as provocant, just as an occasional scar-tissue causes epilepsy. The successful removal of such infrequent sources of annoyance throws but little light on the main issue.

The time to treat all such diseases, is long before the expected outbreak. The success of such treatment will depend upon the possible repair of the foundation. Attacks of hay-fever are frequently aborted by systematic rest, training, mode of life, and building of body strength, together with suggestion. In this manner the individual may escape the fury of attacks, the necessity for change of residence to escape a hypothetical pollen, and the treatment of offending local diseases.

NEURITIS.—Those cases of neuritis suffering from chronic gastro-intestinal catarrh I have frequently observed are first prone to local neuralgias, which pain is the precusor of an insidious neuritis; so that if the stomach is treated successfully you often strike the root of the malady. —Penn. Med. Jour.

BOOK NOTICES

Coakley on the Nose and Throat.—The Diagnosis and Treatment of diseases of the Nose, Throat, Naso-pharynx and Trachea. For the use of students and practitioners. By Cornelius G. Coakley, Professor of Laryngology in the University of Bellevue Hospital Medical College, New York. New (2d) edition. In one volume of 556 pages, with 103 engravings and 4 colored plates. Cloth, $2.75. Philadelphia and New York: Lea Brothers & Co.

Coakley's Manual of the Diseases of the Nose and Throat is, as the author states in the preface, a book for the student and general practitioner. In its compilation great pains have been taken to make it concise, and, at the same time, to make complete the text on examinations, diagnosis and treatment. The second edition brings everything down to date, and in such shape as to be readily referred to and easy to understand, and it is not filled up with the conflicting theories of so-called original researches.

The illustrations are clear-cut, well colored and well selected; and the typography is excellent.

The volume is a handy one for ready reference, and the work is a valuable addition to a medical library.

Jane F. Kennedy.

Modern Obstetrics, General and Operative. By W. A. Newman Dorland, A. M., M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania; Assistant Obstetrician to the University Hospital; Associate in Gynecology in the Philadelphia Polyclinic; One of the Consulting Obstetricians to the Southeastern Despensary for Women. With 201 Illustrations. Second Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Co.

This book covers the subject, is orderly in its composition and concise and clearly written. In reading its 800 pages one is constantly impressed with the assurance that the author has written from experience, and not merely compiled a book.

A full index and the very satisfactory arrangement of the subjects make it easy to find what is wanted by the busy practitioner. "Normal Labor," "The Puerperium," "Diseases of the Placenta" and "Pathology of the Ovum," "Extra-uterine Pregnancy," "Diseases of the Circulatory System and of the Genito-urinary Tracts," "Dystocia," "Sepsis," "Pathology of the Mammæ and of the New-born," are among the subjects treated in a thoroughly scientific manner. It is a great pleasure to read the book as well as to compliment the author. As a reliable book to refer to, it can be conscientiously recommended to every up-to-date medical library.

A. W. Abbott.

A Text-Book of Diseases of Women. By Charles B. Penrose, M. D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania. Fourth Edition, Revised. Octavo volume of 539 pages, handsomely illustrated. Cloth, $3.75 net. Philadelphia and London: W. B. Saunders & Co.

At first sight this book seems to treat rather inadequately of even the most important subjects, but upon more careful perusal this impression is found to depend on the very concise style of the author. As he states in his preface, it was written for the student, and only the well-established facts as to symptoms, pathology and the most approved methods of treatment are given. All speculative theories and operations that have not borne the test of experience, have been omitted. There is really a great deal of reliable information in the book. The chapters on "Lacerations," "Pelvic Tumors," "Ectopic Gestation," "Dysmenorrhea," and "Displacements of the Uterus," are particularly clear and instructive.

The make-up of the book is good. The type is plain, and the illustrations very satisfactorily elucidate the text.

The only criticism of importance that can be fairly made of the book is that the author has seemed to ignore the fact that the student of to-day is well instructed, and can appreciate pathological histology. This part of the subject is hardly touched upon, and only here and there are there drawings to illustrate conditions which the student is now deeply interested in and fully able to understand. But, on the whole, the work is a good one, and can be profitably read and safely relied on by the practitioner as well as by the student.

A. W. Abbott.

Gaylord and Aschoff's Pathological Histology. The principles of pathological Histology, by Harvey R. Gaylord, M. D., Professor of Surgical Pathology in the University of Buffalo, N. Y., and Ludwig Aschoff, M. D., Professor and First Assistant in the Pathological Institute of the University of Gottingen, Germany, with an introductory note by William H. Welch, M. D., Professor of Pathology in Johns Hopkins University, Baltimore. In one very handsome quarto volume of 354 pages, with 81 engravings in the text and 40 full page plates. Cloth, $7.50 net. Philadelphia and New York: Lea Brothers & Co.

The book is worthy of pronounced success in its chosen field, it being intended to supplement the regular courses in pathological histology, and to lead the student and graduate to the application of such knowledge in practice.

Part I deals with microscopical technique. The methods are concisely and clearly given, and are well chosen. Special attention is given to the cutting of fresh material by the freezing microtome, a point of value to the practitioner.

Part II is devoted to the pathological histology of organs. The sections on heart, liver, kidney, and lung are very satisfactory, while those on bone and skin are too brief. In the section on tumors a short description of the various types is given, and nearly six pages are taken up with a discussion on the etiology of carcinoma and sarcoma, with especial reference to the so-called "protozoan of cancer." The section terminates thus. "It is his (Gaylord's) opinion that these bodies are of protozoan nature, and will prove to be the cause of the processes in which they are found."

The reviewer cannot but feel the violence of the effort necessary to introduce this organism, the relationship of which to cancer is still decidedly problematical, while omitting, in its proper place, all mention of blastomycetes (oidia) in their relation to the recently-described cases of blastomycosis (oidiomycosis) of the skin.

The section on blood is valuable chiefly because it brings the technique of blood-staining, etc., up to date.

The plates are very meagre, and not up to the standard set by the rest of the work.

Part III is of great value to those interested in photomicrography, as it gives the author's methods.

The principal value of the work lies in the wealth of illustration, there being 38 plates, each averaging about 6 figures, and 81 illustrations in the text. Photomicrographs of exceptional excellence are abundant, and will be appreciated by the student and practical worker, for their faithful reproduction of lesions as actually seen under the microscope. The chief fault is in the extreme brevity of some of the sections.

S. M. White.

PUBLICATION ANNOUNCEMENT

Jonathan Hutchinson, F. R. S., General Secretary of the New Sydenham Society, has requested Messrs. P. Blakiston's Son & Co., of Philadelphia, the American agents of the Society, to announce the publication of "An Atlas of Clinical Medicine, Surgery and Pathology," selected and arranged with the design to afford, in as complete a manner as possible, aids to diagnosis in all departments of practice. It is proposed to complete the work in five years, in fascicular form, eight to ten plates issued every three months, in connection with the regular publications of the Society. The New Sydenham Society was established in 1858, with the object of publishing essays, monographs and translations of works which could not be otherwise issued. The list of publications numbers upwards of 170 volumes of the greatest scientific value. An effort is now being made to increase the membership, in order to extend its work.

HE KNEW DR. SENN

A patent medicine agent recently called on a prominent local physician, and, believing he could get the doctor interested more readily in his goods if he appeared agreeable, offered his intended customer a photograph of Dr. Nicholas Senn, the famous surgeon. The doctor, who is a great wag, looked at the picture and said: "Why, what a bright looking man. Who is he?"

"Great heavens!" the agent exclaimed, "don't you know who that is? That's Dr. Senn!"

"Dr. Senn?" the physician inquired. "Is he the head of your company, or what is he?"

"Look a here, old man," the agent retorted, "what are you doing? You ain't guying me, are you?"

"Certainly not."

"You mean to tell me that you are a practicing physician and don't know Dr. Nicholas Senn of Chicago?"

The local pillman took the photograph, looked again at the face and said, in his cool way:

"So that is Dr. Senn, of Chicago, is it? Well, well. Of course I know Dr. Senn! Why, he's the proprietor of Sen-Sen!"

The agent gave him up as a lost soul.

REPORTS OF SOCIETIES

HENNEPIN COUNTY MEDICAL SOCIETY

A. E. Benjamin, M. D., Secretary

A stated meeting of the Hennepin County Medical Society was held Jan. 6, 1902, at 8 p. m.; President Dr. H. L. Staples in the chair.

A change in the program was made on account of Attorney Frank D. Larrabee having to leave early, so that his talk on "The Surgeon's Liability in the Management of Fractures," was given first. Mr. Larrabee laid special stress upon the fact that surgeons in general should only be held responsible for bad results in fractures, when they had neglected to use the ordinary care and attention that is given to these cases. He stated that the law prohibits persons from practicing surgery who have not the proper qualifications. He said he had never had but one case against a physician for presumed malpractice, and he promised that it would be his last.

Dr. Sweetser then took the place of Dr. Morton on the program, and reported a case of tuberculosis of the tarsal bone of the right foot, in a young woman 19 years old, in which he made a partial tarsectomy. This case had been operated upon by the curetting method, one year previous. The wound healed in twelve days, and the woman could walk fairly well. He showed the case to the society, and had her walk, to show the good results. The foot was considerably shorter than the other one, but there were indications that almost perfect motion would be obtained in time.

Dr. Law reported a case, a boy 16 years of age, of tuberculosis of the os calcis. He had used the *x*-ray before operation. A curetting method was tried, and the os calcis removed, but the disease returned. All the tarsal bones were removed and the patient walked in about six months. Half a year later metastasis occurred in the other foot. This was so bad that Dr. Dunsmoor made an amputation below the middle third of the leg. There was some recurrence in the tendon-sheathes.

Dr. Staples remarked that great progress had been made in this kind of work, and he considered it more satisfactory to go wide of the disease, and do a complete operation.

Dr. W. E. Rochford then read a paper entitled "Fractures of the Neck of the Femur and Their Management," which is published in this issue of the Lancet, with the discussion on the paper.

Dr. Staples reported that Dr. Herrick and Dr. Ochsner, of Chicago, would read papers at the March meeting of the society.

Dr. Hunter offered the following resolution, which was adopted:

"Whereas, Our representative in Congress, Mr. Loren Fletcher, has signified his readiness to obtain government publications for the Hennepin County Society's library, therefore—

Resolved, That our librarian be requested to forward Mr. Fletcher a list of such publications as he may consider desirable for the library to possess.

The meeting then adjourned.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. John J. Whyte has located at Bertha, Minn.

Dr. W. R. Ramsey has located at Foley, Minn.

Perham, Minn., expects to have a new hospital in the spring.

Dr. G. M. Morton has removed from Toronto, S. D., to Webster, S. D.

Dr. H. A. Beaudoux, of Fargo, N. D., will build a hospital in the spring.

Dr. Thor Moeller, formerly practicing at Hillsboro, N. D., is now located at Rolla, N. D.

Dr. H. L. Staples has moved from the Syndicate Block to the Andrus Building, Minneapolis.

Dr. H. Mc. I. Morton, Minneapolis, has taken offices in the Andrus Building, suite 408 and 409.

Dr. H. A. Peabody, of Webster, S. D., has gone to New York for special study in the hospitals.

Dr. W. C. David, of West Superior, died last month. He had been practicing in West Superior over ten years.

An institute of "Astral Magnetism" is the latest "medical" fad. Such an institution has been proposed for Lake City, Minn.

Dr. Henrik Nissen, of Albert Lea, Minn., has decided to give up practice and return to Norway, where he may remain permanently.

Dr. B. Brandson, of Edinburg, N. D., in company with Dr. O. Bjornson, of Winnipeg, have gone to Germany to study in the hospitals.

Dr. Frank E. Burch, of Glencoe, who was graduated in medicine from the State University, with the class of '97, was married last month to Miss Katherine Jackson, of Minneapolis.

Dr. T. L. F. Armitage has been elected mayor of Princeton, Minn., by a unanimous vote of the people. How thickly honors now-a-days seem to fall on medical men!

The North Dakota State Board of Medical Examiners issued certificates at their January meeting to seven candidates, and five failed to pass the examination.

St. Barnabas Hospital, Minneapolis, has plans for a new building for a Nurses' Home, which will contain an obstetrical ward. The improvement will cost about $25,000.

Dr. E. Z. Wanous, who has been for some time assistant superintendent of the State Hospital at Rochester, has located in Minneapolis, with office at 9 Syndicate Block.

The physicians of Martin and Blue Earth Counties have formed the Blue Earth Valley Medical Society, of which Dr. J. P. Humes, of Winnebago City, is the president.

Martin County, Minn., proposes to abolish the very bad system of asking bids for the care of the county's poor. The new plan is to fix a rate per visit which the county will pay, and then call the physician who resides nearest the patient.

The Douglas County Medical Club was organized last month at Alexandria, Minn. The following officers were elected: President, Dr. F. E. Buchen; vice-president, Dr. C. E. Bachman; secretary, Dr. Francis Peake; treasurer, Dr. A. J. Gilkinson.

The Winona County Medical Society elected the following officers at its January meeting: President, Dr. C. A. Boyd; first vice-president, Dr. L. H. Munger; second vice-president, Dr. R. F. Lynch; secretary, Dr. J. B. McGaughey; treasurer, Dr. G. J. Tweedy.

The Olmsted County Medical Society held its annual meeting last month, and elected the following officers for the current year: President, Dr. J. G. Cross; first vice-president, Dr. O. C. Hyerdahl; second vice-president, Dr. R. H. Russell; secretary and treasurer, Dr. H. Speier.

Gov. Van Sant has appointed the following physicians members of the State Board of Medical Examiners: Dr. Adele S. Hutchinson, Minneapolis; Dr. C. M. Cannon, Merriam Park; Dr. A. B. Cole, Fergus Falls. Dr. Hutchinson succeeds herself, and Dr. Drought, of Fergus Falls, and Dr. P. A. Hilbert, of Melrose, retire.

The physicians of Mitchell, S. D., have formed an association to be known as the Mitchell District Medical Association. The following are the officers: President, Dr. W. E. Crane; vice-president, Dr. F. W. Freyberg; secretary, Dr. B. A. Robb. Every physician in the city joined the association, and one of its objects is to build a hospital in Mitchell.

The Board of Medical Examiners for the State of Washington report the largest list of applicants at the January examinations in the history of the state. There were sixty-two applicants, and it was a cosmopolitan list, containing the following: Edmond Klunke, a Dane, from the University of Copenhagen, who will locate at Ilwaco; Juresae Watnabe, a Japanese, who requires a translator, and expects to settle at Seattle; and G. N. Mikridates, a Greek, from the Athens Medical college, who writes his answers in Greek. Dr. Watnabe (a woman) served throughout the Japan-China war, and Dr. Mikridates served through the Greco-Turkish war.

The State Board of Medical Examiners issued licenses last month to the following: W. E. Bullock, Grundy Center, Iowa; Wm. D. Bloom, St. Paul; G. B. Cross (homeopathic), Nashua, Iowa; J. P. Chance, Royalton; T. J. Caldwell, Deer Park, Wis.; J. M. Caldwell, Deer Park, Wis.; Henry Duncan, Ossian, Iowa; N. F. Doleman (homeopathic), Fergus Falls; W. V. Gulick, Oronoco; G. A. Holdridge, Wayzata; Elizabeth Ingraham, Minneapolis; Henri Labrosse, Foley; O. R. Olsen, Winona; Emma J. Roberts, Minneapolis; Harry E. Sutton (homeopathic), Minneapolis; E. P. Storey, Minenapolis; A. F. Schmitt, Mankato; W. C. Schulze, Duluth; H. M. Trankle, Wabasha; G. H. Thomas, Minneapolis; S. E. Wright, Ely; L. R. Williamson, Campbell. Two candidates failed to pass.

FOR SALE

A practice paying $3,000 a year in a village of 1,200 inhabitants, located at a railroad junction in southwestern Minnesota, is for sale for a small cash price. The physician offering this practice for sale is obliged to retire because of poor health. Address

W. D. Allison & Co.
213 Boston Block, Minneapolis.

NORTHWESTERN LANCET

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INTESTINAL FISTULÆ*

By A. W. Abbott, M. D.

Clinical Professor of Diseases of Women, University of Minnesota

MINNEAPOLIS

Considering the appendix as a part of the intestinal tube, the only normal openings are the pyloric, the anal, the biliary and the pancreatic. All others are therefore abnormal, and if communicating with a free surface are fistulæ. Communications made surgically by anastomosis of the intestine with any viscus and "artificial anus," are the result of remedial intent, as being the lesser of two evils, and will not be discussed; nor will "fistula in ano," now so thoroughly understood, as its discussion would exceed the proper limits of this paper.

Fistulæ resulting from non-development in the embryo are exceedingly interesting, and constitute in themselves a wide subject worthy of a separate study. This paper will take up, therefore, only the non-congenital fistulæ, omitting "fistula in ano" and "artificial anus," as before stated. The time at your disposal will not allow of a detailed history of each of the thirty-three cases which have come under the writer's personal observation, and upon which this paper is based. These are as follows:

Jejunal	1
Iliac	8
Colic	3
Sigmoidovesical	4
Rectoperineal	2
Rectovaginal	10
Retrorectal	3
Multiple	2

There are others of which I have no record, but some recollection, which has in some measure helped to form the opinions herein expressed.

The separating of intestinal fistulæ and false anus, except those of congenital origin, as distinct conditions, seems to the writer superfluous and confusing, depending as it does simply on the size of the opening. No distinction will therefore be made between them.

Taking into account the danger to life and the suffering of the patient, a classification according to the location of the intestinal opening is warningly suggestive to the surgeon, and therefore of the greatest advantage to the patient. In general, it may be stated that the higher the opening, the greater the danger from insufficient assimilation of food, and the greater the distress from surface irritation by the more acrid gastric and duodenal secretions. Duodenal fistulæ are very seldom seen. They have been reported as arising from external wounds and the perforations by duodenal ulcers, the secondary abscess then pointing at the surface. If of any considerable size, they are most dangerous to life from starvation and the violent excoriation of the surface. They should receive prompt surgical treatment. Jejunal fistulæ are hardly less dangerous for the same reasons, but, happily, like those arising from the duodenum, they are seldom seen. The writer has observed but a single case. Its interesting features warrant a brief description.

This patient was operated upon, about seven months before I saw her, for some pelvic trouble, by a median incision. The wound failed to heal, and the discharge had since been continuous. Seven weeks before admission a second attempt had been made to close the opening, but without success. She was admitted to St. Barnabas Hospital, March 11, 1900, with a fistula three-fourths of an inch long in the median abdominal line, and two inches below the umbilicus. There were a few granulations at the skin margin, but the skin was excoriated for four or five inches all around the orifice, and was of a fiery-red color. The surface was moist and exquisitely sensitive. Pain was almost constant, and the smarting and burning became unendurable when partially digested food was discharged over the surface. In these cases the derma becomes thickened and edamatous, the capillaries enlarged, and the nerves so sensitive that the patient cannot take a moment's comfort. All of the food in this case was not expelled, as some of it could be seen passing along the bowel from the right side and being sucked into the left. Up to the time of admission she had had no bowel movement by the rectum for seven weeks, that is, since the time of the second operation. It is interesting to note that curdled milk appeared in the opening in one and one-half hours after its ingestion. The patient was weak and anemic, and presented the appearance of a person exhausted by pain and starvation. The bowel was freed from its attachment to the abdominal wall, the thickened and inflamed ends of the gut exsected, and then brought together by the Murphy button. The recovery was normal, and the button passed on the tenth day. In making the incision to remove the scar and detach the gut, there was a gush of blood from the whole surface of the skin wound. It did not flow from a few arteries or veins, as usual, but seemed to well out along the whole line, as if it were one vessel. Pressure only partly controlled it, and hot water was not even as effective. In anticipation of this, we had had some adrenalin chloride, 1 to 5,000, sterilized, and this we sopped on freely to the bleeding surface. One or two minutes were sufficient to stop the hemorrhage completely. If this agent had failed us, we should have been obliged to suture the whole length of the wound on both sides, or apply clamps to the entire surface. The patient was in no condition to stand even a small loss of blood, and it was fortunate that we had a styptic as quick and as lasting as the adrenalin.

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*Read before the Hennepin County Medical Society, Dec. 2, 1901.

Iliac fistula are the most common of all intestinal fistulæ above the rectum. They tend to heal spontaneously in the majority of cases, and being lower down in the intestine allow of less interference with absorption of food, and the superficial irritation is less. Their situation can be pretty accurately determined by the character of the discharge. If near the jejunum the discharge is more highly colored with bile, thinner and more acrid, and nutrition is also more interfered with. If near the cecum the contents of the bowel approach more nearly to the distinctly fecal type, and nutrition is less disturbed.

Fistulæ arising in the colon and opening directly on the surface are not attended by danger from starvation, but are disgusting to the patient and every one else, and require constant care. When, however, the sinus opens into the bladder or reaches the surface by a long and tortuous track, the danger from sepsis is great, and the suffering of the patient is extreme. A communication between the ileum and the bladder has been described; also between the rectum and bladder in the male from prostatic or deep urethral abscess, but the two cases that the writer has been able to observe closely, and to examine through an abdominal incision and to probe through the cystoscope, have involved the sigmoid only. These cases were in women. In the bladder the opening is usually quite close to the urethral orifice. It is a remarkable fact that the bowel contents escape more or less into the bladder, but the urine, excepting in the beginning, seldom, if ever, flows into the bowel. The reason of this is difficult to understand. It may be because the protruding mucous opening in the bladder acts as a valve to prevent the escape of the urine. In these cases a most aggravating cystitis is the rule, and an ascending ureteritis and pyelitis the unhappy sequel. Dr. C. C. Frederick, of Buffalo, N. Y., has lately reported a case of sigmoidovaginal fistula which is of great interest.

The rectovaginal fistula, while not painful, and in no sense dangerous, unfits the woman for the society of even her husband.

The retrorectal fistulæ are among the most distressing of ailments, are difficult of access, and, if not quickly cured, lead rapidly to a general pyemia.

The sinuses opening at the sides of the sacral spines frequently belong to fistulæ of this class, and often find their way directly through the sacrosciatic or sacral foramina.

There is another form of fistula which may possibly communicate with any part of the bowel, but the writer has seen only a single case, and in that the fistula communicated with the sigmoid.

Sophie J—— had had an operation in the abdomen; at any rate there was a fistulous opening in the median line, where an incision had been made. It had existed a year. Occasionally a small amount of feces would pass. On opening the abdomen a membranous tube, about four inches long and one-third of an inch in diameter, was found firmly adherent by one extremity to the abdominal wall. There were no other adhesions. The other end was continuous with the sigmoid colon. It looked exactly like a good-sized appendix with the top attached to the abdominal wall. It was removed just as an appendix would be, and the intestinal end turned in with covering sutures. Microscopic section showed it to have a structure identical with the colon, of which is was evidently a part, and it had apparently been formed by traction of the bowel after adhesion had become firm.

Finally, there are multiple fistulæ, which open in the bowel and have several external openings. One case seen by the writer began as a gonorrheal salpingitis. General pelvic abscess followed, and then rupture into the bowel, then at the groin, in the bladder, and in the median line, and behind at the crest of the ilium.

As the essential feature in all intestinal fistulæ, now under discussion, must be a perforation of the bowel, the classification may very properly be made (1) of those which begin within the gut, especially from ulceration; (2) those which result from outside penetrating wounds; (3) the sequelæ of hernial and other sloughs; (4) those caused by the rupture into the bowel of abscesses with subsequent external communication.

Fistulæ originating within the bowel are extremely rare from the jejunum to the rectum, but common in the latter portion of the gut. Ulceration and perforation are not infrequent in the peritoneal part of the bowel, but are too invariably followed by a speedy, fatal diffuse peritonitis to allow of the formation of sufficient adhesion, abscess and external perforation. Spiculæ of bone, false teeth, pins and other hard and sharp substances swallowed, and piercing the gut, either produce a like fatal termination by peritonitis, or their passage is so slow and the track of the perforation so narrow, that healing follows, pari passu, with the perforation. The rectum being practically extraperitoneal, ulcerations and penetrations by hard substances are frequently followed by abscesses which burrow in a great variety of directions and seek external openings where the fasciæ offer the least resistance, especially about the anus, sacrum and inguinal region.

Fistulæ from external perforating wounds, stabs, gun-shot wounds, goring by horned animals, falls upon pitchforks or sharp stakes, and unintentional cuts by the careless surgeon—though reported—are very infrequent, because the extravasation of the bowel contents, through the usually large perforation or perforations, is followed by rapid peritonitis and death. As the wound may possibly be extraperitoneal, and a single injury of the bowel more probable, penetrating wounds of the ascending and descending colon are less often followed by peritonitis and death, and hence fistulæ from this class of wounds are more common than in the small intestine. Otis reports 59 in the Civil War records. For the opposite reason perforations of the transverse colon are, almost without exception, fatal, and, therefore, are seldom followed by fistulæ. Rectovaginal fistulæ are in this class, and are far too common. While a few cases arise from the rupture of an abscess into the bowel and vagina, by far the most of them are due to a careless cut by the surgeon in posterior vaginal section or to an imperfectly closed laceration of the rectovaginal septum in child-birth.

Retrorectal fistulæ probably arise from ulcer, tubercle or syphilis in most cases, but undoubtedly some begin with the perforation by a hard substance. The writer removed a piece of chicken-bone from such a sinus in a young dog, and once a piece of glass from a human being that was just cutting through the bowel wall. In another of the writer's cases the opening in the rectum was just within the external sphincter. The cause could not be made out positively, but from the fact that it came on suddenly, without evidence of previous ulceration, in an otherwise healthy young girl, it is probable that it was brought about by the penetration of some sharp, hard substance. An abscess had formed, and dissected off the whole of the peritoneum at the back of the pelvis, leaving a ghastly cavity with vessels and nerves bare. There had been profuse hemorrhages and a constant flow of pus. The rectum was divided posteriorly, including the sphincter, and when a Sim's speculum was introduced into the cavity, the conditions seemed so desperate that an unfavorable prognosis was made. However, the drainage was kept free, and, to the writer's surprise, the healing was uninterrupted, and complete in three weeks.

There is one way in which these fistulæ originate, which is most important and suggestive because it is the sequel, directly or indirectly, of surgery, sometimes unavoidable, but too generally the result of carelessness or imperfect technique. Certainly these fistulæ have become very much more common since the days when the invasion of the peritoneal cavity was practically the death-warrant of the patient. The external openings of these fistulæ are almost invariably found in the line of an incision. If the bowel is torn during the separation of adhesions, an active peritonitis, co-existing over a large area, makes suture, resection or anastomosis out of the question; and the patient is very lucky to get off with a fistula. But suturing in the presence of pus, and the leaving unsutured of a tear through the bowel muscle, are illustrations of causes of fistulæ which are generally avoidable. We used to hear frequently of fistulæ appearing from ten to fourteen days after a laparotomy, without indication of peritonitis or deep abscess, and the surgeon flattered himself that it was not the fault of the operation. It was distinctly the fault of the operation. The explanation is simple. These fistulæ appeared only after the through-and-through suture, and never, to the writer's knowledge, if the peritoneum was first sutured. The trouble did not come from accidentally suturing the bowel, but from nipping a bit of the bowel when the suture was drawn up for tying. This happened to the writer in hastily closing an abdomen, after an operation for tubal pregnancy,in an almost moribund patient. The patient, however, lived, and the fistula healed spontaneously.

Fistula from hernial sloughs seems to the writer to be rare in this country, although Ashurst states that this is the most common cause of fecal fistulæ in civil life in England. They may occur about the umbilicus and the inguinal and scrotal regions. They are the result of neglected herniæ or careless or too prolonged manipulation. Analagous to these are the also rare fistulæ arising from a sloughing appendix, diverticulum, or any bowel constriction.

Fistulæ originating in an abscess outside of the bowel and rupturing both ways, result from severe contusions of the abdominal wall, from prostatic abscess, from deep-stitch abscesses, from pelvic abscesses, and from coarse, nonabsorbable ligatures about adhesions and pedicles which have become septic foci. This form should be thoroughly understood, because avoidable or amenable to preventive treatment. The rupture of the abscess is first into the bowel; secondarily, it points at the surface or into a viscus. If the abscess first ruptures externally, it heals, and no fistula results because, tension being relieved and drainage established, the bowel will not be penetrated. This fact is the key to the preventive treatment. Fistulæ originating by this indirect process may be found anywhere where a communication can be had with the bowel, but are most frequently found about the pelvis. According to the writer's observation, all enterovesical fistulæ in the female so originate.

Allied to these fistulæ are those which are secondary to carcinomatous abscesses of the bowel. The writer has also seen one case of rectoperineal fistula which resulted from a sloughing chancroid of the perineum in the male.

Treatment—A large number of these fistulæ, if small, heal spontaneously or with a little stimulation. If they are due to coarse silk, this may sometimes be fished out with a crochet-needle, when the sinus will usually close rapidly. If large, and especially if high in the intestine, delay jeopardizes the patient, and surgical means should be prompt.

The clamping of the eperon, or spur, the ligature of Physick or the cautery to the edges of the fistula, are mentioned simply as history. In general terms, the true surgical treatment may be said to consist of freeing the gut, and closing it by suture or resection and anastomosis. If the fistula opens upon the abdominal surface, the technique in detail should be as follows: An elliptical incision is made around the opening down to the peritoneum, the very free bleeding to be expected, checked by artery forceps or adrenalin chloride solution. At a point where the peritoneum is free, usually at one of the angles, the peritoneum is opened, adhesion freed as far as possible around, but not including, the fistulous bowel, and then the peritoneum cut close to the bowel, and the included mass drawn out and protected by gauze; the skin and underlying structures are now separated from the bowel.

The treatment of the bowel is now to be considered. If the gut is nearly normal and the opening small, it may be closed by suture. The intestine is usually so inflamed, softened and torn that this is ineffective. In such a case the thickened and torn part of the bowel should be excised, and the bowel re-united by the Murphy button or a suitable suture. If the operation thus far has been clean, the abdomen is closed without drainage. The inflamed condition of the skin does not seem to interfere with the healing of the wound. All fistulæ originating in the true pelvis are among the most difficult to operate. In fistulæ opening through the abdominal wall, but originating in the lower sigmoid or rectum, provided the opening in the bowel cannot be sutured or buttoned, the Wyeth-Marcy method of uniting the bowel after excision of carcinoma may be used. In this operation the loosened ends of the bowel are brought down through the anus, sutured, and then returned.

In enterovesical fistula the operation should be preceded by cystoscopy, the insertion of a soft catheter into the ureter, and a metallic sound in the fistula; otherwise the wounding of the ureter is almost certain, and the differentiation of the fistulous tract very uncertain. The abdomen is then opened, and after the sinus has been located and separated from the adjacent tissues, it is tied off by double ligature at both the bowel and bladder ends, and removed if long; or if short simply clamped and cut. The ends are then turned into the bowel and the bladder respectively, and covered in by sutures. The great trouble is with covering the bladder end. Fortunately it is not necessary to carry the dissection of the sinus clear to the bladder; indeed, this is generally impossible, but it should be left as short as possible. Drainage, if used, should be by way of Douglas' sac in the female, but suprapubically in the male.

Rectovaginal fistulæ may all be cured by the following method: The sphincter ani is first fully dilated, the rectum is exposed by a Sims' speculum, the patient being placed in the left lateral position with the hips high, and the mucosa around the bowel opening closely sutured with catgut, and without freshening the edges. This suture is intended simply to keep the bowel contents out of the rest of the wound. The patient is then placed in the dorsal position, or the Sims' position may be retained, the tissues on the vaginal side freshened down to the rectal suture, and then the wound is closed by one layer of buried catgut and one layer of superficial silver sutures. The bowels are not moved for four days. The operation is, of course, preceded by a thorough evacuation and cleansing of the bowel. The preliminary suture of the rectal mucosa is the essential feature in this operation, and should never be omitted.

Retrorectal fistulæ mav be closed by suturing the rectal mucosa about the inner opening, and then making a wide drainage incision at the side or behind the rectum up to the fistulous point. When the disease originates in tuberculosis of the vicinity, that must, of course, receive appropriate treatment by curretting or removal of bone, etc. In suturing the rectal mucosa great care must be taken, especially if the opening is in the region of the rectal valves, not to close the lumen of the bowel. The writer made this mistake in a case operated upon at the City Hospital where the fistula opened about five inches beyond the anus. This was discovered, however, and corrected before the patient left the table. It is easy to make this mistake because the mucosa at the opening of the bowel does not look so very different from the surrounding mucosa, and a lax fold of the membrane, opposite the fistula, is quite liable to lay just on one side of the intended suture point. The bowel also has a way of ballooning out in front of the speculum, giving one the impression that the lumen continues directly on, whereas it usually is contracted and makes a turn just beyond the point where the mucosa is immovably fixed by the fistula.

The prophylactic treatment may be briefly stated to consist in the early recognition and treatment of syphilis and tuberculosis, in careful cutting and suturing, the avoidance of silk sutures when possible, and always the coarse silk, the early evacuation of pus when accessible, the careful handling of herniæ with early operation if irreducible, and finally a prompt and thorough exploration and suture of all penetrating wounds of the bowel larger than mere punctures.

This is by no means an exhaustive consideration of the subject, but it is offered as a part of our interchange of experiences.

Since this paper was read, the writer saw a unique case of fecal fistula in Dr. J. E. Moore's clinic. The patient had been operated upon twice for appendiceal abcess. The fistula which resulted constantly exuded a thin mucus and at times a small amount of fecal matter. At the operation it was found that the tip of the appendix was adherent to the abdominal wall, and that the open end of the appendix was continuous with the sinus through the abdominal wall, so that a probe could be passed from the surface through the appendix and into the cecum. At the operation the whole sinus, including abdominal wall and appendix, was removed in one piece.

THE MEDICAL DIRECTOR OF THE LOUISIANA PURCHASE EXPOSITION

The important post of medical director of the St. Louis World's Fair has been filled by the appointment of Dr. Leonidas H. Laidley, of St. Louis.

Dr. Laidley was graduated from the Jefferson Medical College, at Philadelphia, in 1868, and from Bellevue Hospital Medical College in 1872.

He has filled the chair of anatomy and chemistry in the Western Dental College, of St. Louis, and after the organization of the St. Louis College of Physicians and Surgeons he was called to the chair of surgical diseases of women. After filling that post for years he was called to the same chair in the Beaumont Hospital Medical College, and, upon its consolidation with the Marion-Sims College, forming the Marion-Sims-Beaumont College of Medicine, he was made professor of Gynecology and Pelvic Surgery. In addition, he is surgeon to the Protestant Hospital, consulting surgeon to the Female Hospital, and a leading member of the St. Louis Medical Society and other medical organizations. He was a delegate to the British Congress, in 1883, and while abroad visited the hospitals of the principal cities. When the Louisiana Purchase Exposition Company was organized he was one of the incorporators.

AN AID IN DIAGNOSIS

According to Loehlein, one of the minor aids in diagnosing is the difference between the left and right hypogastrium on palpation and percussion. In case of tubercular ascites there is distinct dullness left of the median line, above the iliac fossa, while the sound becomes clearer on the right side in proportion to the distance from the median line. The explanation is probably in the retraction of the affected mesentery towards its root, drawing the intestines towards the right side of the abdominal cavity, while the effusion is localized more on the left.—Boston Med. and Sur. Journal.

REFLEXES IN THE RECTUM

The one organ of the body producing more reflexes than any other is the rectum, unless it is exceeded by the eye. It has a marvelous nerve supply; not only do the sympathetic nerves give their quota of branches from the hypogastric plexus, but the single instance of spinal nerves supplying directly a part of the alimentary canal is found in the distribution of fibres from the internal pudic, the fourth sacral and the posterior sacral nerves to the rectum and anus. This is the only ground of communication at the surface between the cerebrospinal and the sympathetic, the voluntary and the involuntary systems. Hence the wonderful disturbances, pathological and physiological, wrought by mechanical or chemical changes in this organ. The possibility of resuscitation from too deep ether or chloroform narcosis by rectal divulsion or by introducing a piece of ice into the rectum depends on this ample and far-reaching nervous supply. And for this reason, again, it requires deeper anesthesia for operation on the rectum than on any other structure in the human body, the eye itself not being an exception.

To draw a conclusion: If a pain in the heel, toe, knee, thigh, sacrum, coccyx, perineum, or penis be of obscure origin, the rectum should be examined, and if a urinary, uterine, or vaginal symptom obtains with no sufficient discoverable pathology, the rectum should have a thorough examination before the case is given up as hopeless.—The Southern Practitioner.

INTRODUCTORY LECTURE ON SURGERY*

By James H. Dunn, M. D.

Professor of Surgery, University of Minnesota

MINNEAPOLIS

The domain of modern surgery is enormous. Few men, even those of brilliant mind, great opportunities, untiring industry, and long experience, can claim to have fully mastered all its divisions and details. Its literature is almost endless. As you know, we have treatises on surgery in one volume, usually large, but they are scarcely adequate for the most superficial outlining of the subject, and they are rarely of much value to a practical surgeon. Works in two large volumes go a little deeper, perhaps, but they are still only brief outlines. Three or four large volumes, if written by exceptional masters, may cover most of the more practical phases of general surgery, but the practical surgeon finds even these encyclopedic works very unsatisfactory on many points, and he resorts to monographs for further light and details. There are voluminous monographs upon special regions, on special organs, and even on special diseases of special organs.

The history of surgery, too, is a long story without some knowledge of which its present status cannot be profoundly understood, and its voluminous and constantly increasing periodical literature is necessary to the broadest understanding of its details. Your attention is not called to this to discourage you,—quite the contrary,—but it is worth your while in entering upon this course to pause a little, and ask yourselves, "How are we to tackle so large and difficult a subject?" Perhaps, if we go about it right, we shall find cause for encouragement. First, leading up to it is a good knowledge of all the primary medical sciences, especially anatomy and pathology. This you are assumed to have had. Some things are best learned from reading and reciting, some from demonstrations and practice on the cadaver, some from observing, examining, and recording, and some things can be best grasped from the living teacher; hence in our course we require you to—

First—Read and do certain things. I advise two kinds of reading. For the purpose of getting an outline I would have you read carefully through during the year some good one-volume work—say, the American Text-Book of Surgery. By setting a regular hour twice a week, and dividing the 1,200 pages of the work into appropriate divisions, averaging 40 pages, you can cover it in a semester. The second method of reading is to look up, clear up, and round out as much as possible your knowledge of cases and operations observed in clinics. For example, you observe several operations for hernia; go home and study the subject over carefully, consulting the authorities on all phases of these particular cases, and, if you have time, go over the whole subject of hernia. You see several cases of fracture of the thigh; think over every phase of the specific case, and the treatment employed, then consult one or more standard works and compare, etc. For this purpose the one-volume work is usually inadequate. On the other hand you scarcely have the time to go into all the details of monographs. That would be desirable if it were practicable. I believe you will find it best to consult some good system of surgery in two or three volumes, like Park, or the International Text-Book, or Tillman, for example.

Second—We have a course in operative surgery. This work is especially useful in learning the ligation of arteries, certain nerve resections, and some typical operations; and you should especially practice the various intestinal sutures again and again, and yet again; for no man should ever think of attempting this difficult feat until he has quite perfected its technique on the cadaver and on animals.

Third—The course in principles of surgery or surgical pathology is an important one, absolutely indispensable at the present day. Theoretically one should have it pretty well understood before taking up the practice of surgery and clinics. In attacking this great subject of surgery, it is not practicable, nor in my opinion is it entirely desirable, to study seriatim each branch in its logical order. We are forced to attack it from many sides at once, and there are advantages in doing so. No man ever learned surgery by going once over the subject, and clearing it up step by step as he proceeded. We work over the field, and get an outline, and for the rest of our natural lives we will need to be filling in, going deeper and wider all the time, going over the ground, not once or twice, but time and again. You learn the cardinal points about, say, appendicitis. Of course you get all you can the first time over, but for ten or twenty years to come you go over, and add to your concept of the subject.

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*Delivered to the Senior Class in Surgery, University of Minnesota.

Fourth—It is, however, in our clinics that we expect you to derive the most practical part of your surgical instruction. Let me give you two warnings: First, do not regard looking on at major surgical operations as the chief object of clinical instruction; do not get the foolish and mischievous notion that operating is the chief thing in surgery. We have many operators in these days, but not so many surgeons. Most any body can operate. In fact, some operate very beautifully who are very poor surgeons. Diagnosis, excellent surgical judgment, non-operative management, and many other things on the whole are certainly far more difficult to acquire, and not less necessary. Indeed, it is a curious fact that the greatest surgeons have rarely been brilliant operators. Understand me, I would not disparage beautiful technique. Acquire as much as possible of it; only remember that it is to true surgery as polished manners are to character. The really difficult part of surgery is much deeper and more difficult. The whole object of surgery is to cure or relieve, not simply to operate. There is more than a suspicion abroad that an increasing tendency exists to look too much upon safe operating as the end, and to regard cure as incidental, rather than *vice versa.* To say the least, a great many follies are being committed in the name of surgery. Recent methods of teaching and exploiting surgical prowess naturally tend to excite rashness in the student. He sees a great deal of operating, but feels nothing of the responsibilities and trials of the practitioner; in fact, only the theatrical and mechanical appeal much to him. Naturally the best results are most emphasized. The disappointments are not always dilated upon. Competition and the desire to attract and to achieve publicity have tended to obscure the sober, serious, and responsible aspects of the surgical clinic. You must not forget the larger, deeper, more trying aspects of the matter. In the clinic, observe, get the history, and follow up the case as much as possible. The operation itself is only an incident in the case, and on the whole often the least important one. Secondly, Don't direct all your attention to major operations. Be constantly and particularly interested in minor, every-day ailments. It is characteristic of a poor and work down. It is a good sign when a stu- student that he would like to begin at the top, dent wants to peg away day in and day out at the foundations. You need have no fears about his superstructures. I have been told that a recent graduate, when ordered by his chief to amputate a finger, excused his poor work by saying that he had never been taught that, but he felt fully equal to laparotomies. I trust no pupil of mine will ever write himself down an ass by such a shockingly idiotic answer. I would dare wager that a man who could hold such views never could be educated into a good surgeon. He shows he has no common sense, no judgment of relations. There are already too many men who think they know all about abdominal or other capital surgery, but who show, if they do not confess, their inability to treat well a simple ulcer, or diagnose the itch. Whatever you do, master the slight ailments and minor surgery. You can never be real surgeons without it, and without doing so you will be dangerous, useless, and disappointed practitioners—failures, sure. If you master the common everyday surgical disorders, you will be useful and successful, and will have laid the foundation for greater things.

Fifth—Didactic lectures. A chief part of my duties is to deliver a course of thirty didactic lectures. Some question entirely the value of such lectures in teaching modern surgery. For my part, I believe there is a limited field for this form of teaching. On the whole, I think our instruction still consists of too much talk and too little work, but a few topics of great practical importance may be presented in the abstract by a practical teacher, with advantage to the student, and until we have a great University hospital, with material enough to illustrate at any time every phase of ordinary surgical practice, it will be desirable to cover systematically the more important and commoner surgical affections by didactic lectures, which serve to systematize and balance up the fragmentary and somewhat distorted knowledge picked up in scattering clinics where the material and instruction often takes a very erratic course. A good teacher, besides the enthusiasm which he inspires, may sketch before the student the great features of practical surgery in proper perspective, which is more or less lost in following text-books and clinics such as present circumstances place at our disposal.

It would be highly absurd in these lectures to attempt to cover the whole field of surgery. I am moved to call your attention to this because each year our ambitious students petition the faculty or myself for instruction in some specific disease which has not been covered. It is better to learn a few things well than to skim over the whole territory and learn nothing well. In my judgment our greatest danger at present is of spreading out until we are all surface with no depth. It is especially necessary to master general principles. I shall, therefore, aim in these few lectures to emphasize and reiterate the great principles of surgical practice, with no thought of describing specific operations, or discussing every or even many surgical diseases. If you learn all about wounds, to recognize their conditions and needs, and the principles underlying their healing; asepsis, and how to achieve it under varying circumstances; anesthesia, in all its forms; shock and its management; the principles governing amputations; the diagnosis, prognosis, and sound treatment of injuries of the head; the indications for, and the technique of, trephining the skull; and, taking up each region, face, neck, chest, abdomen, etc., get a general notion of the practical every-day surgery of each, with a careful consideration of the emergency work in each region, we shall have, I think, accomplished all that is possible in the limited time at our disposal, and the subjects will be those which will prove of most value to you.

In our junior course we have considered fractures, dislocations, and the diseases and injuries of the various tissue systems, such as the bones, arteries, veins, nerves, etc. This, together with the readings which I assign you, and the observation in the clinics during two years, ought to give you opportunity to fairly inform yourselves in the elements of surgery, and that alone is our aim. No medical school hopes to turn out surgical masters. It ought to enable you to pass a respectable state board examination in the subject without cramming. It is perhaps a sufficient qualification for such as expect to follow medical and non-surgical specialties. It is a reasonable preparation for those who expect to follow general practice doing minor and unemergency surgery as probably the majority of you will do for some years at least, and it is a good foundation for such as hope to eventually follow surgery as a specialty, for no medical school can nor should hope to turn out finished surgeons. Such must serve a long apprenticeship as hospital internes, assistants, and special students before qualifying as specialists in surgery. Our present object is to give the best possible general qualifications in medicine and surgery.

I would again advise you to lay the foundations strong. Don't worry about ovariotomies, anastomoses of the ureters, Kraske's operations, laminectomies and the like; but burn your midnight oil over the fundamental principles and the ordinary every-day diseases and injuries. The technique of these rare, difficult, and often still unsettled operations, may have entirely changed even if you have not forgotten it, long before you have need to put it into execution; but the general principles of surgery are enduring, and always applicable in every emergency, small or great.

I trust you will plan your work carefully, and make the most of your faculties and opportunities. Your success lies chiefly in your own hands. My several colleagues and I will spread plenty before you, and will do what little we can to aid you in assimilating it, but you must do the rest. If you cannot digest it all, be sure to take the plain, elementary nourishment, and leave the rich pastries for some other time. They can wait.

SYMPTOMS AND TREATMENT OF COAL-GAS ASPHYXIATION

By Carl J. Lind, M. D.

Assistant Professor of Materia Medica, Hamline University

MINNEAPOLIS

Carbon monoxid (CO) is the main poisonous constituent of the vapors arising from burning charcoal or coal, and also from illuminating gas. This contains from 6 to 10 per cent. The odor of coal-gas is due to substances containing sulphur, which has comparatively a small poisonous action, and therefore should not be taken as a reliable index of its toxicity. The limit of toxicity of carbon monoxid in air is five parts in ten thousand. It is fatal when it reaches 0.5 to 1 per cent. The action of carbon monoxid is purely one of asphyxia. It combines with the hemoglobin, and thus renders the blood incapable of carrying oxygen to the tissues.

The carbon-monoxid-hemoglobin thus formed is not a perfectly stable substance. Carbon monoxid combines with hemoglobin two hundred times more readily than does oxygen, consequently when there is a great excess of oxygen the carbonic-oxid-hemoglobin will be decomposed, and oxyhemoglobin formed. The carbonic-oxid-hemoglobin possesses a spectrum analysis very similar to that of oxyhemoglobin. It may be differentiated from this by the addition of some reducing agent, such as ammonium sulphid, which changes the two bands of oxyhemoglobin into the single band of reduced hemoglobin. The bands of carbonic-oxid-hemoglobin undergo no change.

Carbonic oxid itself is not poisonous, contrary to the common belief. We know this because when animals are placed in oxygen under a pressure of two atmospheres, to bring sufficient oxygen into solution in the serum but containing enough CO to completely saturate their hemoglobin, they show no signs of poisoning. Carbonic acid (CO_2) poisoning is about the same as that of carbon monoxid (CO), except that the action of the former is much slower.

Some time ago I was called to attend a man suffering with carbon monoxid poisoning. The symptoms as presented there were as follows: mydriasis, emesis, unconsciousness or anesthesia and coma; heart depressed, and pulse quickened (120 per minute), in all probability due to paralysis of the vagus. Blood-pressure was very low. I saw two reasons for that: first, from paralysis of the vasomotor center, and, second, from the extreme dilatation of the vessels which gave rise to ecchymosis. The peculiar and characteristic cherry-red color of carbonic-oxid-hemoglobin was present. The patient showed signs of slight and early epistaxis. The respiration was dyspneic, which is usually the immediate cause of death. The motor symptoms were those of slight convulsions during unconsciousness.

From a medicolegal standpoint, the diagnosis of carbonic oxid poisoning must be made by means of spectroscopic examination of the blood. It must also be remembered that carbon monoxid gradually disappears from the blood if exposed to the air, probably inside of six days. The treatment consisted in the admission of fresh air and Sylvester's method of artificial respiration. A hypodermatic injection of two milligrammes (0.002) of nitrate of strychnine was given at once, and was followed by another hypodermatic injection of one cubic centimeter (1.000) of ergotol, to tone up the relaxed condition of the circulatory system.

Inhalation of oxygen should be used when at hand. Next to this, the remedy, *par excellence,* is dioxid of hydrogen (H_2O_2) of the U. S. P. strength. As the patient was unconscious and in a state of total anesthesia, the following drugs were mixed and introduced into the stomach by means of a tube: one cubic centimeter (1.000) of tincture of capsicum, sixty cubic centimeters (60.000) of dioxid of hydrogen, and sixty cubic centimeters (60.000) of pure water.

In less than thirty minutes the patient showed signs of recovery. The object of giving tincture of capsicum is twofold: the first and principal one is to dilate the vessels of the stomach so as to facilitate the absorption of oxygen into the blood; the second is to stimulate the heart and circulation in general. One hour after the first dose of dioxid of hydrogen had been administered, a rectal enema was given, containing one hundred cubic centimeters of hydrogen peroxid, plus three hundred cubic centimeters of pure water. After the second administration of dioxid of hydrogen (H_2O_2) the patient showed signs of partial anesthesia or a semi-conscious condition. He was now able to swallow small quantities of fluid, and was therefore given twenty cubic centimeters (20.000) of (H_2O_2) in a little distilled water every thirty minutes for five hours, and then the same quantity every four hours for forty-eight hours, when it was discontinued. With the exception of a partial loss of memory for a few days, and a little nausea and cephalalgia the patient made an uneventful recovery.

THE ALFRED NOBEL PRIZES

By G. W. Dahlquist, M. D.

COKATO, MINN.

Stockholm, the Swedish capital, has lately been the center toward which the eyes of the scientific world have been turned with considerable interest. This is more particularly true, I believe, of the scientific world in Europe than of that in America, perhaps for geographical reasons, and, perchance, also because at this time only European men of science and belles-lettres played the leading parts in the happy and important occurrence.

There is no reason, however, why the world of science on this continent should not share, in an equal degree, the interest manifested in Europe on the occasion of the first annual distribution of the five Alfred Nobel prizes—each one of which represents a goodly fortune—since learned men of every land are eligible to one of these prizes in years to come, should this work along any described line possess the meritorious qualities and excellence presupposed by the donor, and so adjudged by the awarding bodies of scientists.

Alfred Nobel, the noted Swedish civil engineer and inventor, the discoverer of dynamite, died about five years ago. Through his many investigations in the fields of physics and chemistry, in which he deeply interested himself, he not only attained an enviable position among men of learning, but through his indefatigable industry and efforts in several directions he acquired a fortune of many millions of dollars. It was his desire that the riches which he had accumlated should henceforth be of use in the service of science and belles-lettres, as a stimulus and as a remuneration to men who by their investigations, discoveries, etc., had most merited such a reward. Feeling that his days of labor were nearly over, he made testamentary depositions setting aside a very large capital out of his fortune to be securely invested, the interest therefrom to be awarded annually to such persons who, through research and discovery, or writings, had accomplished the greatest good to humanity, so far as human discernment could decide.

Thus, the interest is to be divided into five equal sums, one to be given to him who has made the most important discovery in physics; one to him who in chemistry has made the research of greatest import; another part to him who has made the most important discovery within the domains of either physiology or medicine; still another sum to be given to the writer who has produced something of the highest excellency of an idealistic tendency; and the fifth part to him who by deed or words has been found to have been the foremost exponent of the idea of fraternization of man, the idea of the diminution to a minimum or of the entire annihilation of standing armies, together with the introduction and general utilization of peace-congresses.

In accordance with the testator's wish, the prizes in physics and chemistry are awarded by the Swedish Academy of Sciences; in physiology or medical work the prize is awarded by the

Royal Carolinean Medico-Surgical Institute, in Stockholm; the prize in literature is awarded by the Swedish Academy, and the prize for the most distinguished services for the establishment of peace to be awarded by five persons selected by the Norwegian Storting (Congress). Each prize amounts to 150,000 crowns (about $40,540) annually.

Nobel expressly stipulated that no attention is to be paid to nationality. The prizes are open to the world, true merit alone being the deciding factor in their distribution. On the 10th of December last, the fifth anniversary of Alfred Nobel's death, in the presence of the recipients of the prizes, royal personages, and a large and representative assembly of men standing highest in the administrative and scientific circles in Sweden, the prizes were awarded as follows:

The prize for the most important discovery in physics to Wilhelm Conrad Roentgen, the discoverer of the *x*-rays.

The prize in chemistry to Jacobus Henricus van't Hoff, professor at the University of Berlin, for his researches and discoveries in chemical dynamics, and concerning osmotic pressure of fluids.

The prize in physiology and medicine to Professor Emil von Behring for discoveries in the serum therapy, more especially that relating to diphtheria.

The above three awards interest us most as physicians, but it may be of sufficient interest to record here that the prize in belles-lettres was given to Sully Prudhomme, and the "Peace-prize," awarded in Norway, was divided between Henri Dunant, the noted philanthropist, who has labored his whole life for the employment of more humane methods in warfare and was the founder of the "Red Cross Society," and Frederic Passy, "doyen de la milice pacific de l'Europe," as he has been called, the founder and president of "Societe francaise pour l'arbitrage entre nations" in 1867, and the "Inter-parliamentary Union" in 1889.

It would seem that these awarding corporations of scientists at this time discharged their duties honorably and with due regard for justice. It is readily understood that their's was a most difficult and delicate task to perform.

Born in Sweden, the largest portion of Alfred Nobel's life-work was done in foreign countries; but to his native land, into Swedish hands, he confidently entrusted his magnificent gift, to be husbanded as he had directed. Sweden has just reason to be proud of her illustrious son, for it is through his productive labors and benevolence that this little country under the arctic circle—yet, in former years it gave to the world such names as Lennè Berzelius, Scheele, and many others—will in years to come hold in her hands the means to encourage scientific research and investigation, wherever found, and reward success, thanks to Alfred Nobel's testamentary depositions, as unique ,because of their cosmopolitian character, as they are unequaled in magnitude.

MODIFIED MILKS

No modification of milk, as now given, can change the inorganic to organic combinations, and unless so important a point (on which depends, very greatly, the development) be taken into consideration, the modified milks fall very far short of the ideal.

I would suggest that both of these deficiencies may be somewhat overcome by a judicious use of the whole egg. Egg albumin approximates quite closely to lactalbumin, and in the egg yolk we have a veritable storehouse of organic phosphorous compounds.—Boston Med. and Surg. Jour.

DISEASES OF THE RESPIRATORY SYSTEM

The attention of the practitioners is called to Terp-Heroin (Foster's) a valuable and efficient remedy employed in all diseases of the respiratory system—backed up by both physiological and clinical evidence.

Summary of advantages—

Instead of interfering with the secretion of the respiratory system it assists.

It stimulates respiration and prevents stagnation of the secretions.

It does not interfere with the action of the heart.

It is not constipating.

It does not produce disturbances of the stomach.

It is not only paliative but curative.

It is a food to satisfy air-hunger.

It is a trustworthy remedy for all diseases characterized by air-hunger.

It is an honest alterative.

It combats auto-infection.

The solution is very agreeable and palatable, even for children, and the observations which have already been gathered as to its therapeutic virtues, are second to none in pronounced character and warrant us in asking our readers to make themselves acquainted with this meritorious remedy.

NORTHWESTERN LANCET

A SEMIMONTHLY MEDICAL JOURNAL

W. A. Jones, M. D. ....Editor

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FEBRUARY 15, 1902

HENNEPIN COUNTY MEDICAL SOCIETY

The meeting of the Hennepin County Medical Society will take place at the Commercial Club, in the main dining-room, March 3, at 6:30 p. m. The dinner will precede the program, and the members are urged to secure their tickets (price, $1.00) as early as possible, so that the executive committee will know how many to provide for. As the society is very large, and a large attendance is expected, the committee urge upon the members the necessity of prompt notification and attendance.

The program is an interesting one. Dr. A. J. Oschner, of Chicago, will present "One Year's Work in Gall-Bladder Surgery," Dr. James B. Herrick, also of Chicago, will read a paper on "Acute Endocarditis." A full report of the meeting will be found in the Lancet for March 15.

RETRIBUTION FOR AN ANTI-VACCINATIONIST

A special telegram to the St. Paul Pioneer Press gives an account of the visit of Dr. Imanuel Pfeiffer, of Weston, a suburb of Boston, to the quarantine hospital. The doctor was a disbeliever in vaccination, and to prove his Rodermundic theory, he spent several hours among the smallpox patients without the advice or consent of the health authorities.

He was subsequently apprehended after he had exposed himself to hundreds of people, and he is now paying his debt by dying of smallpox.

If people disbelieve in the ordinarily accepted, common-sense and proven doctrine they should have sense enough to keep their ideas to themselves. If they preach their doctrines, and attempt to outrage the public health and sanitary laws by such criminal efforts to prove a bad theory a good thing, they must expect just punishment. If smallpox continues to spread in the next few months as it has in the past year, health commissioners will be justified in resorting to any means to check the epidemic. Reformers like Pfeiffer or Rodermund should be legally restrained. If the jail is not the proper place for them, they should be considered as dangerous paranoiacs, and confined in hospitals for the insane. Perhaps the latter view is the most charitable, as all of these so-called cases paranoia reformatoria belong to the defective classes, and have, as a characteristic of their disease, fixed, systematized delusions, which stamp them as sufferers of a progressive psychosis.

THE NEW SWEDISH HOSPITAL

For the past four years a house of fourteen rooms and accommodations for thirty patients has been the home of the Swedish hospital.

During this time eleven hundred patients have been admitted. From February, 1, 1901, to February 1, 1902, three hundred and ten patients have been admitted; of this number two hundred and twenty-nine were Swedish, thirty-eight were Norwegians, twenty-four were Americans, and the rest were of various nationalities. No restrictions as to religious beliefs were imposed, as is shown by the yearly report. Eight different states were represented. A training-school for nurses has been maintained, instruction given, and, if the final examinations proved satisfactory, diplomas were awarded. The first class of nurses, of whom there were three, was graduated in May, 1901. Notwithstanding the disadvantages of a crowded building, the hospital has prospered, so much so in fact that the trustees felt encouraged to build a new hospital. The new building will be ready for occupancy the first of March. There are sixty-five rooms which will accommodate about one hundred patients. There are two operating-rooms, and the building is modernly equipped with all hospital and clinical facilities.

The location, Eighth street and Tenth avenue south, is convenient of access, and has pleasant park surroundings. The vigor with which this new hospital was projected and completed is worthy of commendation.

The Lancet congratulates the management, and wishes it all manner of success.

AMERICAN MEDICAL ASSOCIATION MEMBERSHIP

Two hundred and fifty-eight new members of the A. M. A. are reported by the Journal for the month of January. Not one new member from Minnesota! What is the matter with our medical men? South Dakota sent in six new names, North Dakota two, Wisconsin six, Iowa four, and California thirty.

Dr. Wyeth, the new president, in a circular letter urges medical men to join the "only representative national organization in the Union," the one great aim of which is to federate into one compact organization the medical profession of the United States. Its comprehensive scheme embraces the formation in every county of a medical society, with a uniform constitution and by-laws, each of which shall belong to the state association, organized and governed with equal uniformity, and all a part of the national body.

Of course it is expected that difficulties may arise in counties or states where societies are few and at too great a distance for medical men to attend. Such matters will be adjusted in time by the formation of new county societies or the eligibility of men to societies in adjoining counties. These possible delays should not prevent men in populous counties where societies already exist from joining the association.

Let our Minnesota medical men bend every effort to affiliate with a society, and send in applications for membership to the A. M. A. that Minnesota may make a good showing before the meeting at Saratoga.

Fifteen children between six months and two and one-half years old, who played on the floor in poverty-striken homes, where one or both of the parents had tuberculosis, were examined to see if tubercle-bacilli could be discovered on their hands or nasal membrane. Nearly 90 guinea pigs were inoculated and virulent tubercle-bacilli were found on the hands of two of the children and in one in the nose.

CORRESPONDENCE

THE HAY-FEVER STORM

Minneapolis, Feb. 8, 1902.

Editor Northwestern Lancet:

The presence of a foe in the dark seems to inspire some men to shoot in the air. Hay-fever is the particular foe which is exciting the professional imagination in this particular medical center just at present, and the obscurity of its pathology seems to determine the ratio of the random shots which the mention of its causation draws from the literary freeshooter. After one has followed up a few of these flying bullets of argument it remains a question what the skirmish is all about. A pathologic nihilism comes over the doubter, and he is inclined to adopt the negative spirit of the Dutchman's defense of his vicious dog: "In the first place, my dog—he don't bite; in the next place, my dog—he don't have no teeth; in the third place, I don't have no dog in the first place." The skeptic wonders if hay-fever has a tangible cause; if, after all, it is not all a matter of suggestion.

A recent writer in the Lancet attempts to raise the wind by the assertion, argued in extenso, that hay-fever is invariably caused by "pressure in the nose." The agents of pressure are said to be hypertrophied masses of mucous membrane and exostoses of the turbinates. Since it is physically impossible that intrinsic pressure should result where there is extrinsic room, it is difficult to see how the pressure theory can work in any way save to cut off the patient's wind, while it serves to fill the rhinologist's sails. Then, again, why should the sufferer from this hay-fever-producing pressure find one parallel of latitude deadly to him, and another a few degrees to the north deadly to the disease? He carries the pressure causes with him.

In the next issue of the Lancet, the neurologist jumps out into the pathologic gloom, and fires a few illuminating shots into this elusive subject. If there is such a thing as a bacillus of hay-fever, as some people suppose, it ought to retire in confusion when it catches a glimpse of the "nerve unit with unfortunate habits," which it has made its sneezing victim, or when it sees the vision which the nerve specialist conjures forth of "the distorted functions of nerve-cells" upon which it has cruelly imposed. No wonder that the intrusive streptococci find easy the invasion of such a disordered pathologic field as the hay-fever neurotic presents! According to the neurologist's theory, indeed, hay-fever ought to be as common an experience as birth among the denizens of our fast-living American cities; for are we not all neurotics in degree? And why should this particular neurosis exhibit itself only in haying time or in pollen-harvest season, if it is based upon an inherent instability of the nervous mechanism of the neurotic? Why should this instability reach only such arhythmic climaxes? Is there an equinoctial in nerve-storms even though the meteorologist has disposed of the equinox as a cause of periodic atmospheric bouts? Next comes along the physiologic chemist with a potent cause of this nasal cataclysm. He finds it in the blood, whose maximum alkalinity keeps the urates in seclusion while its diminished characteristic reaction distributes them at times to local hurt. His hypothesis is reasonable, at least, in its recognition of the time-element in the disease.

Seriously, if all of these several theories could be reasonably applied to the physiologic conditions with which they are concerned, might not each of them fit into its own place as a factor of cause and a suggestion of cure?

There is a peripheral, a distributive and a centric field to be considered in the study of the disease. A nerve-storm, the paroxysm of hay-fever may well be termed, but a nerve-storm is only an exaggeration of normal activities. All nerve function is initiated by stimuli. Any irritant upon the nasal surfaces may serve. Upon a hyperemic and hyperesthetic area, any irritant, any stimulus acts with violent results. Well and good,—here is the first factor in the development of the storm, a normal stimulus acting exaggeratedly upon an over-sensitive surface. If, at certain seasons, certain particles in the atmosphere are more numerous or more irritant than at other times, the greater the storm. And what surface any more liable to, or fitly furnished for, hyperemia then the mucous membrane of the nose. The tendency to vicarious menstruation via the nasal chambers illustrates the fact. Given, an abnormal vascularity, a redundant tissue and the conditions of irritability are emphasized. The exostoses and hypertrophies fall into place as factors in this disturbance of the peace. They serve, not as agents of pressure, but as promoters of hyperemia, and hyperemia always tends to hyperesthesia in sensory-nerve terminals.

The lines of least resistance along which these exalted impressions from this sensitive area travel, are measurably broken down, in part, perhaps, because of the disordered chemical qualities of the body-fluids, in part, perhaps, because of an inherent instability in the nerve tissue itself. These impressions run riot, and crowd in upon nerve-centers in explosive condition, with energy-exploding violence. A neurotic quality, an impaired metabolism, faulty elimination, nerve-tire—each and all may add to the unstable storage-power of these nerve-centers, and the storm is on. Nerve paths and nerve-centers may all be pathologic, but the primary factor remains the sensitive terminal area in the nose. The storm develops where the storm-exciting conditions obtain.

Rest, climatic change, germ-free or pollen-free atmospheres, removal of redundant tissues and systematic elimination of waste material—each falls into line of logical relation as measures of prevention or of cure.

Let us have less literature and more research; more physiology and less specialism.

R. O. Beard.

HAY FEVER, AGAIN

Minneapolis, Feb. 7, 1902.

Editor Northwestern Lancet:

To "make hay while the sun shines" is an axiom that does not apply to the treatment of hay-fever. The time for therapeutic activity in this disease is when the sneezing season is off. The specialist knows this, and he is out for business. He usually gets it through the medium of the medical journal. Just now he is actively exploiting theories of cause and cure, and he is not always a nose and throat specialist.

A recent editorial in the Lancet (Feb. 1) upon the subject of hay-fever is stamped with the sign-manual of the neurologist. After admitting that the pathology of hay-fever is a debatable ground, this writer gives utterance to the dogma that all hay-feverites are neurotics, an assertion that is very dogmatic and invites discussion. The editor assures the reader that a paroxysm of hay-fever is a "nerve-storm," and he argues from this the instability of the patient's entire nervous system. He admits that pus germs may be found in the affected nose, that a hyperemic mucous membrane may exist, that local irritants may serve as excitants, but he insists that the only way to cure hay-fever is to reform the whole nervous system of the patient. Possibly the merely peripheral irritation may be responsible for the whole tempest. Possibly an occasional hay-fever sufferer may be a neurotic, and that may aggravate the storm indications, but there is no very logical ground for the assumption that the work of forestalling the outbreak belongs exclusively to the neurologist. Perhaps the rhinologist may materially assist the static and sinusoidal expert. Certainly, all the machinery, mental or physical, which the latter may bring to bear upon the nervous mechanism of the hay-feverite will be sadly inefficient if a diseased mucous membrane remains as the locum tenens of the disorder.

A combination of the expert forces might be desirable, but in print the neurologist should not insist upon appearing in such "heavy-faced caps," and set the rhinologist down in "lower case."

W. N. Porteous.

THE PHYSICIAN AND THE AUTOMOBILE

Minneapolis, Feb. 7, 1902.

Editor Northwestern Lancet:

So many inquiries have come from physicians asking about my automobile, that for their benefit I will relate some of my experiences and observations. In the first place, the question comes, "Which is the best machine for the physician, gasoline, steam or electricity?" The question was one that I had in great part to decide for myself after boring my friends for a month or two by asking questions about their machines, and accumulating catalogues from different parts of the country. I decided to buy a second-hand steam machine, and it is here that I took my first lesson. The owner of the automobile I expected to buy took me for a ride down town and, to show me how easy it was to manipulate, exchanged places with me in the carriage, and gave me control of the vehicle. Our ride came to a sudden termination; in trying to avoid the teams, and manipulate the different levers which were new to me, I turned the wrong way and dished one of the front wheels by running into the stone curb. This short ride of less than two blocks cost about ten dollars. This brought the question of repairs strongly to my mind.

It was some time after this that I took my second lesson. This time it was in a gasoline carriage, the kind that I am now using, the "Oldsmobile." My experience this time was in taking the part of passenger, and keeping my eyes open. I was with a reckless driver, and expected every few minutes to be a subject for an ambulance call. However, barring a few mishaps, we returned from several trips, whole and sound, and I placed my order for an Oldsmobile.

Some of the reasons that led me to purchase a gasoline machine are the following:

In looking over the electric vehicles on the market, I came to the conclusion that they would not answer my purpose. While they were neat and ran very nicely on good roads, they could not be relied on for any certain distance, and the batteries deteriorate very rapidly, necessitating new cells at a no small cost. The other day one of my doctor friends telephoned me asking how I liked my machine, stating that he had an electric, which was represented to him as having the capacity of traveling fifty miles on one charge of electricity, but he had not been able to get more than twenty miles at any one charge, and frequently could not go that far. He had used his machine about three months, and had been furnished with a new set of batteries.

In looking over the steam carriages I found a good many points in their favor, but much muts be done each time one starts the machine, outside of the regular work of filling the boiler with water, etc. Gasoline is used for fuel, and the boiler is constructed on the same plan as a gasoline stove. You first let a small quantity of gasoline into the cup under the generator, and light that, then wait a few minutes for the generator to get hot so that it will vaporize the gasoline. When the generator is hot you are then ready to light the main burner. After this is lighted you wait to get up steam, which takes about ten minutes or longer, depending upon the machine and how it is manipulated. You always have to watch the water in the boiler. Should it get dry considerable damage will be done in a few minutes. Should you by accident or otherwise let raw gasoline into the burner, and then try to light it, you will have a fire, and if you are not lively there will not be much left of your machine. A number of times during the past summer the Minneapolis street sprinklers have been called upon to quench fires caused in this way. Some drivers of steam rigs have a hose connected with their engines so that in an emergency their machine may be converted into a fire-fighting engine to extinguish the fire under its own boiler. The amount of gasoline used for fuel by a steam machine is about three and one-half times the amount used by the gasoline engine to develop the same power.

In the gasoline automobile you have a vehicle that is ready at any and all times, provided you have given it proper attention. A man may spend two hours a day taking care of a team and buggy, but let him take an hour to an auto, and the people think he is crazy, or that the machine is no good. To give a machine life you must take care of it. With my Oldsmobile, a turn or two of the crank and I am ready to go, whether it is to make a night call, or after the machine has been standing on the street for hours. There is no danger of fire or explosion. You can buy gasoline at almost any store and at farm houses.

My mobile was late in coming, owing to the great demand at the factory, but I made up for lost time when it finally did come. The evening it came the agent here, Mr. A. F. Chase, delivered it in my back yard, and after cautioning me several times not to take it out of the yard for several days, until I had thoroughly mastered it, left me to work out my own salvation. In less than three quarters of an hour I invited my wife to take a ride with me, and we went through the center of the city. Fortunately we did not get towed back.

The driver of the auto must be ever ready to avoid accidents, and especially in the country, where the horses have not made the acquaintance of the "beast." City horses that see them every day in the city and never move a muscle when they go by, prick up their ears, and are ready to run should they see one in the country.

There is a fascination in gliding along over the country without biting the dust of your horses' heels or of those ahead of you, for you are in the lead. There is a feeling to move faster, faster, faster; and the chauffeur wishes he might be with Fournier on his sixty horse-power monster. Think of it; Paris to Berlin, seven hundred and forty-five miles, in seventeen hours, at times going at the rate of eighty miles per hour,—an ordinary block or two hundred and fifty feet, while you count one. Physicians may wish to travel that fast at times, for with them it is always hurry, hurry; but if we made such time in Minneapolis the city police would run us in, so at present I am content with my little Oldsmobile, of four horse-power.

C. D. Harrington.

BOOK NOTICES

A Medicolegal Manual. By William W. Keysor, Lecturer on Medical Jurisprudence in the Omaha Medical College, and Judge of the District Court, Omaha, Nebraska. Price, $2.00. Omaha: The H. J. Penfold Company.

This book is written for doctors rather than for lawyers, and it aims to present and emphasize the legal side of medical jurisprudence, and to furnish useful legal information of particular importance to medical men. Dentists and pharmacists will find the manual helpful to them.

The various chapters deal with law and its agencies, legal duties, physicians' contracts, malpractice, evidence, the doctor as a witness, with suggestions as to his conduct on the stand, life insurance, insanity, the defective and diseased mind, delirium and dreams, marriage and divorce, fruits of cohabitation, determination of sex, post-mortem changes and examinations.

The chapters are condensed into 294 pages, and are written in an interesting way. The ground covered is rather different from other treatises, and consequently the work is of more value to practitioners who are not often thrown upon their own resources before the courts.

Diseases of the Intestines. By I. Boas, Specialist for Gastro-intestinal Diseases in Berlin. Authorized Translation from the First German Edition, with Special Additions, by Seymour Basch, M. D., New York City. Illustrations, 47; Pages, 560; 8 vo. Price, $500. New York: D. Appleton & Company.

Until very recently no exhaustive work on intestinal diseases has been published. This book is especially intended for the general practitioner, but on account of the exhaustive and concise description of physiologicochemical processes and laboratory methods, it must prove of value also to other scientific investigators.

Undoubtedly, the surgeon has contributed most to the progress of internal medicine by his explorations for appendicitis, intestinal obstruction and stenosis, benign and malignant tumors. It is the internalist, however, who must bear mainly the responsibilities for operative interference, while the surgeon should be responsible for the technic.

The surgeon and internalist are thus brought into close relationship, and to both will the book appeal.

The introductory chapters consider the anatomy, histology, physiology and chemistry, and the derivation of intestinal gases.

Part I—Embraces history-talking, examination of the patient, x-rays in diagnosis, examination of feces, analysis of stomach contents, and urine analysis, as valuable in intestinal diseases.

The chapters on general therapeutics discuss dietetics, hydrotherapeutics (including mineral waters of the U. S.), massage, injections, inflation, and medicinal treatment.

These chapters are interestingly and exhaustively written. The author believes the idea that some substances are more easily digested than others is gradually losing many adherents, for we are gradually coming to the conclusion that the digestibility of foods varies in each individual case. He lays down the following rules:

1. In a number of intestinal diseases a change of diet is unnecessary, or may even be harmful.
2. In some cases special dietetic restrictions are directly indicated, but these should be as few as possible.
3. In another series of cases abundant, heavy, not easily digestible or absorbable diet is indicated.
4. The general aim of our treatment should always be to so manage the case before us that digestion of a normal diet will always occur in the alimentary canal without any subjective or objective disturbances. Under these circumstances only can the case be considered cured.

Intestinal diseases are classified and treated in Part II as follows:

1. Diseases of the mucous membranes (ulcers of the duodenum, jejunum and ileum, acute and chronic enteritis, carcinoma, and intestinal ulcers in general).
2. Functional disturbances (increased or diminished peristalsis).
3. Stenosis or occlusions.
4. Localized peritonitis (appendicitis); diffused peritonitis.
5. Neuroses.

There are forty-seven illustrations in the book; and the printing and the index to diseases and authors make a complete volume.

The publishers did their work admirably, and have given us a handsome book.

An International System of Electro-Therapeutics. For Students, General Practitioners and Specialists. By Numerous Associated Authors. Edited by Horatio R. Bigelow, M. D., Permanent Member of the American Medical Association; Fellow of the British Gynecological Society and of the American Electro-Therapeutic Association; Member of the Philadelphia Obstetrical Society, of the Société Francaise d'Electro-Thérapie, and of the Anthropological and Biological Societies of Washington, D. C.; Author of "Gynecological Electro-Therapeutics," and "Familiar Talks on Electricity and Batteries." Second Edition. Revised and Brought Up-to-Date, With Several New Departments Embodying the Most Recent Developments of the Science. Edited by G. Betton Massey, M. D., Ex-President and Fellow of the American Electro-Therapeutic Association; Member of the American Medical Association; Author of "Conservative Gynecology and Electro-Therapeutics," etc. Thoroughly Illustrated. Royal Octavo. Pages x-1147. Price net, $6.00. Philadelphia: F. A. Davis Company.

This work attempts to fully illustrate what electricity can accomplish therapeutically. At the outset one is impressed with the variety of forms that electricity takes, each with its distinctive results, and the necessity of having suitable appliances for utilizing them.

There is the modern faradic coil, with its six secondary coils, ranging from 528 winds and .8 ohms resistance, to 1,300 winds and 2,500 ohms resistance, and its motor interrupter breaking contact from very slow to 50,000 per minute. There are the sinusoidal, with its very rapid and painless alternations; the powerful static, with its tremendous voltage and rapid oscillations, producing ozone and the x-ray; the galvanic, with its polar chemical activities, governed by current controllers that will vary the strength from 1,000 milliamperes to the fraction of one without shock; the electric light baths for the whole body and for special joints; the tub and spray baths combining hydrostatic with electric effects. We have the improved large metal indifferent electrodes covered with clay, cotton or punk for heavy currents, with the active electrode, a fine needle or made of gold, platinum or for electrolysis, a positive electrode of silver, zinc, or copper and sometimes amalgamated with mercury. We also have for cavities the excellent water electrodes.

Galvanism, owing to its chemical activities, has a wide range of utility. The negative pole will absorb strictures, says Dr. Newman, with 3 to 5 milliamperes of current. They may be uretheral, rectal, uterine, eustachian, tear-duct or others. It will remove hairs and nevi. It will remove exudates about joints, and near fractures and sprains and also in the vicinity of the uterus. It will help goitre, hydocele, and atrophic rhinitis. With water electrode it will cure constipation, and many forms of intestinal occlusion. The positive pole will cause cataphoresis of many drugs, i. e., cocaine for anesthesia, cocaine with aconitia for neuralgia, lithia salts, mercury salts, and others. It will produce electrolysis with copper, zinc, silver and mercury. It will stop hemorrhage, especially uterine. With the aid of fine wire it will cause coagulation in sac of aneurism. With powerful currents and mercury it will destroy uterine cancer. Many fibroids are being, and have been, successfully treated with galvanism. Transformed it furnishes us with the cautery and diagnostic lamps.

The effects of the faradic current differ very much according to the secondary used, and the speed of interruption. The short, coarse wire coil with slow make and break gives strong, painful, muscular contractions. As the speed increases and the number of winds of fine wire are greater, the sedative effects are argumented until in longest high tension coils we have remarkable effects on pain. These results are very helpful in gynecological work.

General faradization, especially with the tub or spray bath, is very effective. Its use as "nerve and muscle irritant" is well known in paralysis, vesical weakness, and constipation. With dry contacts it is a very powerful counter-irritant.

The Sinusoidal current decreases sensation, and increases muscular contraction, with increase of the number of alterations until the muscles are tetanized; and at about 2,500 alternations per second sensation and contraction disappear. It acts especially well on unstriped muscles. It is very anesthetic. It greatly increases metabolic processes, and increases muscular strength.

The electric-light bath, preferably the arc light, owing to its greater intensity and ozone-producing activity, stimulates all nutritive processes, and is useful in poor nutrition from any cause, in chronic rheumatism, chronic coughs, and many chronic skin diseases.

In static electricity we have a means of producing marked results through the clothing. In the form of the breeze or static bath its effects are very sedative, and cause an increase in elimination of excretions. With the spark we produce powerful contractions, with the usual stimulation to the circulation. Just as marked results, with far less discomfort, may be produced with the indirect spark, i. e., with metallic skin contact to any part to be treated attached to one pole, the patient insulated or not, and the strength of the current regulated by the spark-gap between the discharging rods. It is especially useful in spinal applications and joint troubles. The static induced current can be used in the same way with moist electrodes.

The static, sinusoidal and faradic lack the chemical activity of the galvanic, but in relieving pain, stimulating muscular activity, increasing metabolism, allaying nervousness, they find a wide field of usefulness, and all these currents produce these general effects more agreeably and far more effectually when applied to the entire body immersed in the bath.

These are the claims of the authors, and medical men who have equipped their offices for using electricity in all its forms, will agree fully with most of the claims made, and they will also find the work invaluable in their libraries.

W. P. Spring.

American Medicine states that each physician in the United States has 655 persons to look to for his support, according to the latest governmental statistics. California stands at the bottom, or top, depending on the view, of the list, for there are only 416 actual and prospective patients for each physician, while in Alaska 2,034 persons have to depend on one doctor. New York is near the average with 603 persons for each physician. Pennsylania has 662 and New Jersey has 856.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. T. J. Taylor, of Salem, S. D., is planning to open a private hospital.

Dr. S. V. Groesbeck, of Spearfish, S. D., has moved to Watertown, S. D.

Dr. O. R. Olsen, a graduate of Rush, has located at St. Charles, Minn.

Dr. A. F. Blomberg, of St. Hilaire, is located at Thief River Falls, Minn.

Dr. O. T. Sherping has moved from Enderlin, N. D., to Fergus Falls, Minn.

Dr. J. W. Cook, of Chamberlain, S. D., expects to move to Ashland, Neb.

Dr. J. E. Boehm, of St. Cloud, Minn., is an unopposed candidate for alderman.

Dr. E. O. Miller, of Aberdeen, S. D., has gone to Philadelphia to do special work.

Dr. Henry C. Watson, of Bemidji, died the last part of January at the age of 60.

Dr. W. W. Holden, of Amboy, Minn., has begun practice at Winnebago City, Minn.

Dr. E. A. Eberlin, a graduate of the State University, has located at Glenwood, Minn.

Dr. A. J. Doty, of Colman, S. D., has returned after two months' special work in Chicago.

Fairmont, Minn., expects to have a hospital. The Business Men's Club has the matter in charge.

The partnership between Drs. Spottswood and Coleman, of Lidgerwood, N. D., has been dissolved.

Dr. W. L. Cowper has been appointed superintendent of the county board of health at Michigan City, N. D.

Dr. J. G. Skarro, of Minneapolis, died on Feb. , after a long illness. Dr. Skarro was born at St. Peter, Minn., and was 43 years of age.

Dr. W. A. Hobday, of Marshall, Minn., has gone to Louisville, Ky., his former home, for treatment for rheumatic troubles.

Dr. G. P. Bearman, a graduate of McGill, Montreal, and of the Post-Graduate Hospital, of Chicago, has located at Fingal, N. D.

An effort is being made to raise $10.000 for improvements and the enlargement of the Deaconess Hospital of Grand Forks, N. D.

Dr. J. E. Schneider, who has been practicing in St. Peter, has decided to return to Blue Earth City, Minn., where he formerly practiced.

Dr. J. L. Hamilton, of Carrington, N. D., has decided to remove to Idaho. He will be succeeded by Dr. Edwin L. Goss, of Sheffield, Iowa.

Dr. Scanlan has resumed his practice at Page, N. D., after an absence of several months spent at Minneapolis and other points in special study.

Dr. C. L. Smith, of Dickinson, N. D., has gone east for a visit to the hospitals of New York and Philadelphia. He will be absent several weeks.

Dr. Thomas Thayer, from the state institution of Middleton, N. Y., will succeed Dr. Waite on the staff of the Insane Hospital at Fergus Falls, Minn.

Dr. J. P. Aylen, of Sheldon, N. D., is not in very good health, and while he takes a rest his brother, Dr. W. W. Aylen, of Montreal, will take charge of his practice.

The Sisters of St. Ursula have purchased St. Mary's Hospital, at Webster, S. D., and they will make extensive improvements in the building and its equipment.

The Central Wisconsin Medical Society met last month at La Crosse, and was attended by a number of Minnesota medical men, who were royally welcomed and entertained.

Devil's Lake, N. D., is to have a fine hospital building, work upon which will be begun in the spring. The structure will cost $20,000, and the hospital will be conducted by the Sisters of Mary.

The following candidates are reported to have passed the N. D. state medical examination last month: E. L. Goss, L. O. Kron, A. Oftedal, B. Campeau, S. W. Wells, R. C. Thompson, and A. Jameson.

The Eastern Dakota Medical Society was organized last month at Brookings, S. D. Dr. A. J. Cox, of Tyler, Minn., was elected president, and Dr. D. J. Coller, of Brookings, S. D., was chosen secretary and treasurer.

Fergus Falls, Minn., is talking up hospital matters, and the citizens feel that a thoroughly-equipped modern hospital should be built. If the movement succeeds, a handsome sum of money will be raised for the purpose.

The two medical societies, regular and homeopathic, of Sioux City, Iowa, have formed a third organization for the purpose of maintaining a regular schedule of fees. The price of visits will be increased from $1.50 to $2.00, and bargain prices will be discountenanced.

Dr. Henry W. Foster, mayor of Bozeman, Mont., and a leading physician of that state, died in Minneapolis, Feb. 6. Dr. Foster formerly lived in Minneapolis, the lot now occupied by the Minneapolis Club having been on his father's homestead. Dr. Foster went west immediately after taking his degree in medicine, and he built up a very lucrative practice. Most of his savings were invested in a fine hospital building of nearly 50 rooms at Bozeman, which has just been completed. His death will be a great loss to Bozeman, for it ends a life of great usefulness.

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THE TIME TO OPERATE IN APPENDICITIS, WITH DISCUSSION*

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MINNEAPOLIS

Since the time the true pathology of appendicitis was discovered, and surgery employed for the cure of the disease, until the present, a discussion has been going on among surgeons as to the time to operate. All agree, I believe, that the beginning of an attack, within a few hours after its onset, is the most favorable time for operation, because it is impossible to tell at the beginning of the attack how severe it will be and whether or not the first attack will not prove the fatal one. The next favorable period upon which all are agreed, is the interval period; i. e., where a patient, having been fortunate enough to recover from one or more attacks, is operated upon between the attacks when apparently free from the disease. Here the mortality sinks to its lowest point which is one per cent or less.

Having named the periods upon which surgeon's agree, it remains to be considered upon what period of time, in the existence of an attack, is there a difference of opinion as to the advisability of operation. It is the time after the first twenty-four or thirty-six hours of the onset of the disease, until rigidity, tympany, and other well-known symptoms of the disease have disappeared. In the symptoms I purposely omit temperature, for it is not a reliable one, inasmuch as a patient may have a ruptured appendix, and a belly-full of pus, and a normal temperature.

This is the time in which the management of a case will be very different with different surgeons of equal ability and recognized as masters of the art by the profession; and I suppose the cause must be in the difference of their experience and the results they have obtained. This is our guide in the management of other diseases, and so it must be in appendicitis. If our experience is worth nothing, it is either because our observation is not good or our reasoning faulty. It is impossible to follow blindly the teaching of any man, however learned, and be as successful as is our privilege.

Cases of catarrhal appendicitis may be operated upon at any time, with almost no mortality and these cases we exclude. There are also the fulminating cases, which are so rapidly fatal that the most expeditious means will fail to save them; and these also we exclude as beyond the help of surgery.

The cases then that are left, and the ones to which I call your especial attention, are the pus cases, and the cases with gangrenous or ruptured appendices. In many instances the patients have refused early operation, or not having been told plainly and truthfully of their danger, they were unable to judge for themselves what was best. It is here that the medical practitioner has the responsibility laid upon him. It is he who visits the homes, and if any one sees the case early, he is the one, and upon him the family depends, and with him the future of the case largely rests. What shall he do? Shall he say, "Yes, you have appendicitis. Of course, it is a dangerous disease, but a great many get well without an operation, and you do not want an operation if you can help it; do you? Take this medicine I leave you, and I will see you tomorrow, and if you are not better in two or three days, we will talk about an operation." Practitioners here before me, have you not repeatedly told patients, in substance, what I have just read? You know, or ought to know, that medicine is unable to cure appendicitis, and that you have done nothing during those two or three days, unless you have been ambitious to give something, in which case you have done worse than nothing. It is your duty to tell the patient his condition plainly, and at once, and to insist that a surgeon be called. You have then done your whole duty. You may tell him, if you choose, that when the operation is done within the first twelve or perhaps twenty-four hours, the mortality will be about one or two per cent; i. e., one or two in one hundred cases will die, but when the operation is done in four or five days, the mortality is from fifteen to seventeen per cent; i. e., one in every six or seven cases operated upon will die. And this is the mortality rate in cases operated upon by one of the best surgeons in the world,—a surgeon of whom we are all proud, and whose ability as a diagnostician, dexterity as an operator, and faultlessness of technique are recognized from one end of this country to the other. I refer, as you will readily guess, to John B. Deaver, of Philadelphia. I have no doubt but that our mortality would be greater than Doctor Deaver's if the operations were performed under like conditions.

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*Read before the Hennepin County Medical Society, February 3, 1902.

I understand that statistics are figures that can be manipulated and are often unreliable and misleading, but it seems to be the only means of comparison we have. The personal experience of any operator who has thoroughly and conscientiously tried different methods, is worthy of consideration, even if he has no statistics to report; for he knows quite well with which method he has been able to save the most lives. For several years I followed the teaching that the time to operate in appendicitis is as soon as you have made the diagnosis, and I have observed that in a certain class of cases there was almost no mortality, while in another class—those with vomiting, distended and rigid abdomens, who were operated upon after the first twenty-four hours and within a week or two—the mortality was larger.

Some sad personal experiences, the repetition of which I wished very much to avoid, drove me into refusing to operate at that period, with the argument that the patient would die anyway, and why bring trouble upon myself and give surgery a bad name, thereby frightening others away who might have chosen an early life-saving operation? Much to my surprise many of these cases did not die in that attack, and finally arrived at a condition in which it was quite safe to operate. These cases are anxious to avoid another such ordeal, and willing to be operated upon.

Instead of doing nothing and allowing these cases to get along as best they can through an attack, Dr. Ochsner, in his very admirable address delivered before the Section on Surgery and Anatomy, at the fifty-second annual meeting of the A. M. A. at St. Paul, advocated washing out of the stomach, prohibiting the use of every kind of food and cathartic by mouth, and the use of rectal alimentation for the support of the patient until the dangerous period had passed. I believe this to be a step in the right direction, and it has served me well.

Too often our medical societies, as is the case with all other societies, are turned into mutual-admiration meetings. A paper is read by a member, and is usually commented upon favorably, if at all. Open criticism, if deserved, is uncommon, the members preferring to say nothing rather than to take issue with the essayist, lest his feelings be injured. This is altogether wrong. The object of our meetings and writings is to exchange ideas and to secure mutual benefit thereby. What we may say, therefore, by way of comparison between results claimed by any surgeon is not made in the spirit of criticism with the thought of advancing one and injuring another, but with the thought of arriving at the truth, as nearly as we can, in order that we may save the most lives possible that are entrusted to our care.

In an article entitled "The Mortality of Appendicitis," published in the Journal of the American Medical Association under date of October 5, 1901, Doctor Deaver gives an account of 268 cases of appendicitis operated upon by him at the German Hospital, Philadelphia, in the year 1900. 144 of these cases were operated upon in the acute attack, and 124 were chronic cases. Of the 144 acute cases 26, or 17.8 per cent, died; but three of these may, I think, with justice, be omitted. One had diabetes mellitus, and an abscess was drained under local anesthesia, the patient dying of uremia; another died of post-operative pneumonia on the second day after operation; and the third had advanced phthisis. Omitting these three cases, there will remain 23 deaths in 144, or 15.9 per cent. In the chronic cases only one death occurred in 124, and this was complicated with an ovarian cyst and numerous inflammatory cysts.

This, in brief, is the report, and is, I believe, several points better than that made by many other well-known surgeons who operate as soon as they make the diagnosis. From Jan. 1, 1898, to May 1, 1901, two years and four months, Dr. A. J. Ochsner, of Chicago, reports 565 cases of appendicitis operated upon by him, at Augustana Hospital, Chicago, averaging approximately 243 cases a year, or 25 fewer than done by Deaver in a year. Ochsner divides his cases into three groups.

1. Those who entered the hospital suffering from diffuse peritonitis.

2. Those who entered the hospital suffering from gangrenous or perforative appendicitis.

3. Those who entered the hospital suffering from recurrent appendicitis in the interval between attacks, or at the beginning of a recurrent attack, where the infectious material was still confined within the appendix.

Of the first class, he treated 18 cases, with 10 deaths, or 55.5 per cent mortality. Of the second class, he operated upon 179 cases, with 9 deaths, or 5 per cent. Of the third class, he operated upon 368 cases, with one death. Uniting the first and second classes, we have 197 cases with 19 deaths, approximately 9.6 per cent. All of the cases reported, that survived the attack came to operation. In those cases that were operated upon as soon as seen, we have shown there was a mortality of 15.9 per cent, which gives a difference of 6.3 per cent in favor of deferring the operation in acute cases, as described above in classes one and two.

In the early operation and in the chronic cases, there was practically no difference.

Last fall I made a visit to my old home in Ohio, a little town about thirty-five miles from Columbus. A few days before my arrival, one of the wealthiest and most influential men in the village had died following an operation for appendicitis. I was told that nearly every case operated upon there died, and as there had been some fatalities in cases not operated upon, the people were really alarmed. In trying to arrive at a cause for so many deaths, I asked when these cases were operated upon. The reply was: "Our home doctors take care of the cases until they get very sick, and find they must be operated upon, and then send to Columbus for a surgeon." The result was too many deaths. The question was repeatedly asked me, "What shall we do if we have appendicitis?" and my reply was, "Send for the surgeon at once and have an early life-saving operation, but if you will not do that, and if you become very ill after four or five days, refuse an operation at that time. You will have a better chance to recover from that attack than you will have if operated upon at such a time."

We all appreciate the difficulties of operating upon many of the cases with old adhesions, and the inconvenience and danger of fecal fistulæ, but if statistics are worth anything, they prove that the danger in operating upon these cases is much less than in the acute cases. It would be instructive to know how many cases of appendicitis prove fatal in the first attack, but I do not know of any statistics covering the point.

I have purposely omitted quoting medical statistics on the subject, because I do not consider them of any value. The same case may be reported as cured a dozen times, having recovered from as many attacks, and finally died of the disease. Again, it is impossible to follow many of the cases, and so the termination cannot be stated.

To summarize:

1. In the early hours of an attack, preferably the first twelve, insist on operating, and tell the patients the danger of delay.

2. In cases with rigid and distended abdomen, vomiting, etc., who have passed into the second day or beyond, do not operate, for their chance of recovery from the attack is better without it.

3. Advocate operating in the interval, when the risk is slight, thus avoiding danger of recurrence.

DISCUSSION

Discussion reported by Dr. A. E. Benjamin, secretary Hennepin County Medical Society.

Dr. Dunsmoor opened the discussion. He congratulated Dr. Little on his paper, and thought this was still an important subject, as it had occupied the minds of surgeons for a number of years. He thought that if it was possible to know the true pathology in each case, we could be more certain of the proper time to operate. He said about 80 per cent of all classes recover without operation, but that many of these had recurrent attacks. It was his opinion that those cases which recover without operation, would recover by operation. He thought Dr. Ochsner's method a very good one, but he was positive that by using the alimentary canal for drainage, by giving cathartics, much good was received. He considered the best time to operate was during the first hours of sickness. He did not think it was fair for surgeons to refuse to operate on some cases just because it was not the most favorable time, nor did he think it a good plan to delay too long, as some cases soon develop septicemia. He thought the lay press was wrong in reporting that patients died of an operation; for they do not die of the operation, but of the disease from which they were already suffering.

Dr. Abbott said the essayist had expressed the status of the profession on the subject of appendicitis. In the fulminating cases of peritonitis, we are apt to delay a case if doing well. This was all right and understood. If someone could tell us what pathological condition was present each time, a rule might be laid down. He considered the statistics of McBurney quite reliable. McBurney had made a number of post mortems, and had seen evidence of attacks of appendicitis in people who had died of other diseases. These statistics show that about 70 per cent of cases recover without operation.

Dr. Hunter reported a case in which he had diagnosed an attack of appendicitis in a married woman. He suggested an operation, and to make doubly sure, recommended the patient to consult another physician, whose name he gave her. The patient, upon presentation of a bill by Dr. Hunter, had said that the other physician told her that she had not had an attack of appendicitis. In this manner he lost his fee and patient as well, and the patient had criticised him for his diagnosis. Dr. Hunter stated that in one of Dr. Deaver's clinics, Dr. Deaver had said when he had had 200 cases of appendicitis, he thought he knew considerable about it and was willing to offer an opinion; but when he had had 700 cases he was not willing to express an opinion. Dr. Hunter thought there was some danger in postponing an operation, because when an abscess cavity had to be drained, there was danger of obstruction to the bowel, which would make necessary a second operation. He thought of the 18 cases treated medically by Dr. Ochsner, reported by the essayist, 55 per cent of whom had died, that we were unable to conclude that some of these could not have been saved by an operation.

Dr. Wright said the cases reported by Dr. Ochsner in his article were of the type of diffuse peritonitis, and that, when treated medicinally, 55 per cent died, and when operated upon 80 per cent died.

Dr. Dunn did not believe that Dr. Murphy operated upon every case as soon as he made the diagnosis, for Dr. Murphy had stated to him a short time ago that he had changed his mind considerably about these cases. Dr. Dunn thought that the rules laid down in Dr. Little's paper, read this evening, were as near correct as could be stated. He thought we were unable to classify cases exactly, but the greater the experience of the operator, the nearer correct would be his conclusions and the better his classifications. In his opinion there were some medical men who would treat these cases until the handwriting on the wall be discovered, and would call in a surgeon to take the responsibility of the case. He thought that we, as surgeons, were learning the wisdom of refusing to take such responsibility at a late date, and operate upon the case. In every case where pus was present, there was a bad result, and, if possible, it would be best to refuse to operate upon cases with pus. The ideal time to operate was in the very beginning, as the operation could be complete and thorough.

Dr. Moore thought Dr. Little had brought out the consensus of opinion of the operators of the Northwest, relative to appendicitis. A few years ago, we were inclined to accept the opinions of Drs. Murphy and Deaver, yet he, Dr.

Moore, had kept a little shy of the radical treatment laid down by Dr. Deaver, as he had never been in favor of operating upon every case as soon as seen. He had also told Dr. Deaver that his own statistics condemned his method. Dr. Ochsner, he thought, was the exponent of the other extreme, and there must be a happy medium between these extremes. Each case was a law unto itself, and no hard and fast rules could be laid down. The general practitioner and surgeon should support each other in the effort to save human life, and he wanted the general practitioner to feel that, when a surgeon was called in, he might refuse to operate under certain conditions. He reported a case which he was called to see in the country, by a general practitioner; and because he refused to operate at that time he gained the ill will of the attending physician, but undoubtedly saved the patient's life by deferring the operation until a more opportune time. As he now had the appendix of this patient in a bottle, and the man was up and attending to his business, he had won the everlasting gratitude of the man, if not of the physician.

Dr. Cutts thought one method of treatment was occasionally neglected, namely, in those cases where there is an accumulation of pus in the cul-de-sac. He advised, as did Bernays, that the cul-de-sac should be opened by vaginal incision, and in males through the rectum. These examinations should not be neglected, and when pus had formed on the fifth or sixth day, the cavity should be opened frequently.

Dr. Staples exhibited an appendix which he removed from a boy 16 years of age. There was a slight rise of temperature in the beginning of the attack, but apparently recovery followed the next day, so that the boy was desirous of attending school. In the afternoon the boy was suddenly seized with severe pain; the pulse was 115, and the temperature 103°, with symptoms of intense shock. He was immediately removed to the hospital, and on operation a ruptured gangrenous appendix was found, and a general suppurative peritonitis established. Thorough drainage was maintained, and he made a rapid recovery.

These fulminant cases are ominous, and the only hope lies in immediate diagnosis and operation.

Dr. Little, in closing the discussion, wished to thank the gentlemen for their kindly criticism. He thought this was still a live subject for discussion, as there were some modifications of treatment that should be adopted by some for the purpose of saving lives. No one form of treatment can be followed at all times. When there was a mass in the side or an abscess cavity, it was time to operate. When there was no mass in the side, it was best to delay. It was his opinion that fever is not an indication of the severity of the disease. He illustrated a case of this kind, and stated that he had expressed an opinion that the patient would die if operated upon at that stage. The truth of this statement was verified when the patient died shortly after an operation done by another physician. It was his experience that hernia almost always followed where drainage had to be established. He thought the ground taken by Dr. Moore was right in refusing to operate upon the case mentioned.

ERYTHEMA KERATODES

Among the inflammatory forms, reference must be made to a chronic erythema of the palms and soles, leading to overgrowth of the horny tissue, which has been described by Brooke under the name of "erythema keratodes." It is accompanied by edema and tenderness, and thus tends more or less to cripple the patient. The erythematous nature of the affection is shown by the fact that it begins in an inflammatory process. This differentiates it from the condition of keratosis or simple hypertrophy of the horny layer of the palm or sole which forms a hard plate on the surface, and thus, when situated on the foot, interferes with walking, and on the hand, may make manual work difficult or impossible. I have had among my patients a farmer, who used to spend a couple of hours every Sunday evening whittling down the horny masses on his hands to get them into a fit state for work. His daughter had also to perform the like farrier's work on her hands. Fortunately, the erythematous affection responds readily to treatment; the other is practically incurable, but may be greatly mitigated by the persevering use of salicylic acid (a 10 per cent solution in ether).—

ANTE-PARTUM DIAGNOSIS*

By Soren P. Rees, B. S., M. D.

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MINNEAPOLIS

Accurate diagnosis is the essential requisite for success in the practice of medicine. For its acquirement, painstaking and systematic work is necessary. Now that the exact cause and nature of many maladies are known, a wide knowledge of drugs and their probable action—the armamentarium of the old physician—becomes of secondary importance to an accurate understanding of the signs and symptoms by which the disease may be diagnosed. The diagnosis made, the treatment is often simple and not confined to drugs. Especially is it important that the young physician should examine with the utmost care and system every patient that comes to him for advice. Only in this way will it become a habit with him to do work of a high order. Like perfect asepsis in surgery, accuracy in diagnosis must be learned by constant doing. In obstetrics the field seems specially promising, because hitherto very much neglected, many physicians undertaking cases of labor without any previous examination of the patient or inquiry into her former health. The results are self-evident, and would not be tolerated in any other field of medicine or surgery. From a selfiesh standpoint, moreover, it is the very best advertisement, and one of which a physician may be justly proud to have it said that he insists upon making a thorough examination of every patient before giving any medicine or advice. The more thoughtful people—those that will be most valuable as patients and friends—will quickly see the advantage to themselves of this course. In a country practice there are still many who will say that the young doctor can't know much yet. as he is always reading his books, or who will find fault because he insists upon being "too clean." They will perhaps praise Dr. A as a great doctor because he can tell by a mere look what ails them in cases where you find it necessary to make a careful examination. Still, I have again and again found that a complete and systematic examination of the patient, besides giving me the necessary information for treating the case properly, has also inspired the patient with the confidence that was necessary to enable him to follow out my advice successfully.

It is especially of the field and value of ante-partum diagnosis that I wish to speak to-day, and the patient present, who is nearly at full term, will well illustrate the points to be considered. For your convenience I have prepared an outline, modelled after the Record Chart in use in the lying-in department of the Post-Graduate Hospital of New York, with some modifications and additions. This chart is intended as a guide in making a complete examination of the patient, and if followed is especially valuable in fixing the habit of a definite plan of procedure in such cases. The outline explains itself, and your knowledge of the subject will easily enable you to appreciate the importance of the investigation and correct interpretation of each item. In apparently normal cases the seventh month is considered the most favorable time for making a complete examination. At this time the fetus can be well mapped out, and sufficient time still remains for the consideration of the induction of labor, should such steps be considered necessary, or for the correction of a faulty presentation. We shall have, from time to time, patients for examination in the different stages of pregnancy, and we can thus learn the progress of its signs.

Before going over the patient in detail, your attention is called to some of the more important items, in order that they may receive special attention.

Diseases before and after puberty should be carefully inquired into. Rickets in infancy and injuries in youth are the most common causes of a deformed pelvis. After puberty gonorrhea and pelvic inflammation should be especially noted. A knowledge of these will often materially

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*A Clinical Lecture delivered to the Senior Class of the University of Minnesota, January, 1902.

ANTE-PARTUM DIAGONOSIS

Name .... Address .... Date ....
Age .... Birthplace .... Race .... Para.
Diseases { Before Puberty (Rachitis, Injuries, etc.)
After Puberty (Gonorrhea, Pelvic Inflammation, etc.)
First Menstruation, Age .... Duration .... Amount .... Pain ....
Subsequent Menstruations, type .... weekly. Duration .... Amount .... Pain ....
LAST Menstruation { Sure
Doubtful (first day of) .... 190.. Duration .... Amount .... Quickening ......
Character of Previous Pregnancies (miscarriages?)
Previous Labors { Easy.
Instrumental (physician present?)
First Labor (date) ...... Last Labor (date) ..... Children ...... Alive ...... Dead ...... Age and Cause of Death ....
Previous Puerperiums (Fever, complications) ....
Present Pregnancy, vomiting .... Headache .... Edema ....
Family History ....

EXTERNAL EXAMINATION

I. INSPECTION AND PALPATION

General Appearance { Face .... Attitude .... Stout or Lean ....
Height .... ft. Weight .... lbs.
Breasts..... { Size .... Form .... Consistency ....
Sensibility .... Secretion .... Veins ....
Papillæ .... Striæ { (new) (old) .... Cicatrices ....
Ariolæ { (Primary) (Secondary) .... Nipples { (Size) (Erect?) .... Pigmented? ....
Abdomen... { Form .... Striæ { (new) (old) .... Cicatrices ....
Fluctuation .... Pigmentation ....
Umbilicus { (Protruding) (Depressed) .... { Intermittant Uterine Contractions } .... { Abdominal Ballottement } ....
Abdominal Wall (Fat) .... Lax or Tense .... Palpation { (Easy) (Difficult) ....
Uterus: Size .... Months. Form .... Position ....
Fetus { Presentation .... { above or below } Brim. Position ....
Small Parts .... Movements ....
Lower Extremities: Edema .... Varicosities ....

II. AUSCULTATION

Fetal Heart { Where Heard { (Loud) (Faint) .... Frequency .... Regularity ....
More than one? .... Umbilical Souffle ....
Uterine Souffle. Where Heard { (Loud) (Faint) ....

III. MENSURATION

Distance Between Spines .... Cm. Distance Between Crests .... Cm.
External Oblique: Right .... Cm. Left .... Cm. External Conjugate .... Cm.

INTERNAL EXAMINATION

I. INSPECTION AND PALPATION

External Genitals { Pigmentation .... Secretion .... Veins ....
Perineum .... Rectocele .... Cystocele ......
Vagina { Length .... Size .... Secretion ....
Sensibility .... Temperature .... Mucous Membrane ....
Cervix { Length .... Size .... Position .... Softening ....
Laceration .... External Os .... Internal Os ....
Uterus—Presenting Part .... Ballottement ....

II. MENSURATION

Pubic Arch { (wide) (narrow) .... Depth of Symphises ....
Diagonal Conjugate .... Cm. True Conjugate .... Cm.
Transverse Diameter of Outlet .... Antero-Posterior Diameter Outlet ....

URINE

Reaction .... Sp. Gr .... Albumen .... Sugar ....
Microscopical Findings ....

BLOOD (If indicated)

Erythrocytes .... Leucocytes .... Hemoglobin ....

SPUTUM (If indicated)

Cough? .... Expectoration .... B. Tuberculosis? ....
Date of Expected Labor .... Examined By ....

SUBSEQUENT OBSERVATIONS

(Abnormalities, Future uranalyses, etc.)

modify your procedure, and hold out to the relatives and friends a less promising prognosis. Thus, if gonorrhea has been present, antiseptic douches sometime previous to confinement, the abstinence from making any vaginal examination at the time of labor, and the necessity of watching more closely both mother and child after delivery, are evident. Previous pelvic inflammation and abscess formation are especially important from the prognostic standpoint. I have lately seen a post mortem on a young girl who died twenty-two hours after being delivered of a healthy, living child at full term. The cause of death before the autopsy was not known. The necropsy revealed nearly a quart of purulent fluid in the abdomen, and the focus in an old abscess about the left ovary and tube that had broken at the time of labor. The mother was a strong, healthy-looking girl of sixteen years. In private practice it would mean much to the reputation of the physician to be able to give warning of such a calamity before labor set in, and not to allow it to fall upon the family unwarned and unsuspected, like a clap of thunder from a clear sky.

The nature of the first and subsequent menstruations as to time, duration, amount and pain is important as showing probable inflammation, and the infection or misplacement of the uterus and appendages, inducive to abortion, miscarriage, or infection at time of labor. They also give by comparison with the last menstruation the most trustworthy evidence whether conception had already taken place at this time, in which case the menstruation may be very brief and scanty, or sometimes after, in which case the period will be full and complete.

The character of previous pregnancies, labors and puerperiums gives valuable information to the accoucheur as to what he may reasonably expect of the present pregnancy. In this connection it may be well to warn against any meddlesome interference with the patient during labor, either by frequent examinations or uncalled-for aid in delivery. Labor is a natural process, and in every case where nature is able to do the work, she should be left to do it unmolested. Many of the best obstetricians attend confinements, and content themselves with sitting by until the baby is born, and then tying the cord. Such attendance bespeaks the highest skill, providing your ability in diagnosis and knowledge of child and mother enable you to know that the labor is fully within nature's limits. Such an attitude must never be prompted by ignorance, timidity, or lack of knowledge of the exact conditions present in the case. Only a short time ago, one of our leading gynecologists mentioned to me the fact that during the absence or illness of other physicians he had lately been called upon to attend several confinements, and that he had in each instance quietly sat by and entertained the patient as best he could, and had left all the work to nature. He remarked that under normal conditions a perineum left to itself will be less likely to tear than one that is "supported." I merely mention these cases, not to discourage watchfulness and the prompt employment of all measures that may help us in our work, but to point out what is the correct attitude in a confinement where labor is known to be normal. A careful and complete ante-partum diagnosis can alone give us the assurance that all is in readiness for labor to begin and be completed.

External Examination.—I wish to call attention to the subject of inspection. Inspection is lately gaining in favor and value as a means of diagnosis, especially in abdominal diseases and chronic nervous ailments. It is surprising what an amount of information a careful scrutiny of the patient will yield, and it is a measure that is either entirely omitted or given but slight attention. It should be your aim to so perfect yourselves that in favorable cases, by means of inspection and palpation of the abdomen, you may be able to diagnose the size, form, position of the uterus, the position and presentation of the fetus, and such abnormalities as hydramnion, multiple pregnancy, tumors, etc.

In these days when the operative field of gynecology is so actively cultivated, scars and cicatrices on the abdomen or in the vaginal wall become of great importance. The literature is full of cases where abortions, ruptured uteri, and hemorrhages occur on account of previous operations on the uterus.

Study with care the nature and location of the fetal heart sounds, both as an aid in determining the position and presentation of the fetus (the rule generally holding good that when the heart sounds are heard below the umbilicus a head presentation may be expected), as well as giving early signs of approaching asphyxiation of the child in a tedious labor, with a prolapsed cord. When the fetal heart sounds, formerly strong and clear, become faint, rapid and irregular, a speedy delivery is called for.

Mensuration.—Under this head so many things influence the easy or difficult delivery of the child—its size, especially head, its maturity, also the size, musculature and general temperament of the mother—that no one measurement is sufficient. The distance between the outsides of the crests should invariably be greater than that between the outsides of the anterior-superior spines. In making the internal measurements, the hand has the advantage of being always present, and efficiency in this method should therefore be encouraged.

The examination of the urine is now routine practice, but it should be remembered that the urine in the later months of pregnancy may have been perfectly normal at the last examination and in a week or ten days be found loaded with albumen and casts. In all cases frequent examinations should be made. A count of the red cells and the percentage of hemoglobin in all cases where anemia is present will not only give definite proof of the condition of the patient's blood, but will often call attention to a marked anemia otherwise easily overlooked, which, if not treated, would severely tax the patient's recuperative powers after labor. A count of the white cells may be of value in cases where a previous infection or inflammation is suspected.

In every case where a slight cough or expectoration is present, or other symptoms indicative of incipient tuberculosis exist, a careful examination of the patient's chest and sputum must be made. Often the previous history of an acute tuberculosis reads that the patient, after repeated child-births, became run down and consumption set in, whereas the tubercular infection had already existed, but had not been discovered until repeated pregnancies exhausted the patient's strength, and allowed the infection to run riot. An early diagnosis of tuberculosis and the necessary restrictions upon the woman's sexual life, would save, in many cases, the mother to her family for years, and might even allow a permanent arrest of the disease. (The patient is here carefully examined according to each item on the chart and her record entered accordingly.)

It is to be hoped that some such regular scheme for examining your patients will be adopted and followed in your future work.

THE WIDAL REACTION IN DIAGNOSIS OF TYPHOID IN CHILDREN

Dr. Milton Gershel thus concludes an article on the above subject in the Medical Record:

1. The main facts concerning the Widal reaction in children are the same as those that hold true for adults.

2. In 84 cases of typhoid fever in children, ranging from one and a half to fourteen years of age, 81 cases gave a positive result.

3. In 115 cases that were fevers other than typhoid, the positive reaction was never obtained

4. The reaction did not occur later in children than in adults, as is claimed by some writers, but, on the other hand, somewhat earlier. However, we should not lay too much stress on this point.

5. The Widal test is of greater importance in children than in adults, owing to the frequent atypical character of the disease in the former, and the greater frequency of cases resembling pneumonia and meningitis.

6. As pointed out by Morse, the reaction will be of service in establishing the frequency of typhoid fever in children.

ARTHRITIC NEUROSES

A series of cases with painful symptoms usually located in the neighborhood of joints, which had been diagnosed either by the patients themselves or by their physicians as rheumatism, have occurred at the New York Polyclinic in the service of Professor Katzenbach. When the patient was not able to give a straight history of acute rheumatism, that is, red swollen joints, fever and sweating, the case was at once assumed to be not rheumatic in character. It has seldom been necessary to retract this assumption, during the subsequent treatment of the case. Some 40 patients were under treatment and of these 15 that presented so-called rheumatic symtoms of the lower limbs were found to be suffering from flat foot. This proportion, a little more than one-third, represents very nearly the ratio in which flat foot symptoms are mistaken for rheumatism.—American Medicine.

HAY-FEVER: A REPLY*

By Floyd S. Muckey, M. D.

MINNEAPOLIS

In the Lancet of Feb. 1 is an editorial on "Hay-Fever," which contains some statements that should not be allowed to pass unquestioned. You say, for example: "The supposition that the pollen of certain plants is the usual exciting factor in an attack is not well maintained." To support this assertion you state that "Recent experiments have shown that temporary irritability of the mucous membrane has resulted from the introduction of unusual quantities of pollen." It is difficult to perceive how this statement invalidates the pollen theory. It would seem, rather. to support it. I do not think any one ever claimed that pollen acts in any other way. When the air is filled with pollen each breath makes a fresh application of it to the sensitive mucous membrane. Thus the temporary irritation is made continuous as long as the irritant is present in the air.

Again, you say: "Attempts to immunize patients by saturating them with the fluid extract of rag-weed have shown the uselessness of such procedure." No sane man ever claimed that there is a toxic principle transferred from or developed by the pollen whose poisonous effect can be counteracted by saturating the patient with "liquor ambrosia" or the fluid extract of rag-weed. The pollen is supposed to act as a mechanical irritant and nothing more. This alone should show the folly of dosing the patient with such concoctions. The mechanical irritant theory would seem to be supported by the fact that dust other than the pollen of flowers will bring on an attack. Further, microscopic examination of the varieties of pollen which are most obnoxious to the hay-fever patient have shown these little particles to be studded with minute spinous processes, which thus render them much more offensive to the sensitive mucous membrane. It receives some slight support also from the circumstance that mechanical irritation of the nerves of the scalp by the use of a stiff hair brush will sometimes set up a paroxysm of sneezing. Your second statement therefore, has no bearing one way or the other upon the pollen theory.

As to the ubiquitous streptococcus, the writer must own that he knows absolutely nothing in regard to its relation to an attack of hay-fever. The fact that it is found in the nasal secretions of normal persons as well as of hay-feverites would tend to minimize its importance as an etiological factor. In support of the pollen theory we have the following facts:

1. The application of pollen to the nasal mucous membrane will bring on a paroxysm.
2. The great majority of the attacks occur during the season of the year when the air is filled with the various forms of pollen.
3. The attacks occur more frequently and are more severe in the country and small towns than in large cities, where pollen is not so plentiful.
4. Microscopic slides covered with some sticky substance have been exposed at various stations where the occurrence of hay-fever is common, occasional and absent. An examination of these slides has revealed the presence of many pollen particles at the "common" station, only a few at the "occasional" station, and none at all at the "absent" station.
5. The removal of the patient from the "common" to the "absent" station will prevent an attack, and will even arrest it after it has begun. "Absent" stations are found only on shipboard at a distance from land, or in high altitudes.
6. The first hard frost, and the consequent killing of vegetation, relieves most hay-fever patients. As attacks do occur in winter, when no pollen is present in the air, it has seemed necessary to broaden the pollen theory to the dust theory. For this reason it is stated in my paper that "The presence in the air of various forms of dust particles, especially the pollen of flowers, is an essential element in the etiology of hay-fever."

From the above considerations it seems difficult to escape the conclusion that dust in some form is an essential element in the etiology.

Again, you state that "The majority of hay-fever sufferers are neurotics." The writer would strengthen this statement by saying that all hay-fever sufferers are neurotics. In no other way can we account for the fact that thousands of people have catarrhal conditions in the nose which cause pressure on the terminal filaments of the nasal nerve, and yet they do not have hay-fever or asthma. There must be some unstable condition of the nervous system which favors the transmission of this irritation. In no other way can we explain why the patient sometimes escapes an attack without any treatment whatever. In no other way can we explain how the taking of drugs to allay this irritability will sometimes abate the violence of the paroxysm. But when you say that the foundation of all such diseases must be sought in the nervous system, I cannot agree with you. In the first place there are thousands of neurotics who do not have hay-fever. In those who do have it the neurotic condition continues after the hay-fever disappears, showing conclusively that some other factor, or factors, is active in its production. To illustrate, I will cite a case which can be verified by any one who feels inclined to do so. A lady, an art teacher in the Boston public schools, is a hay-fever sufferer. Her home is near the base of Mount Tom in the Berkshire hills. At the close of school she returns to her home. She remains there until the latter part of June, when she is attacked with hay-fever. She is then obliged to go to the summit of Mount Tom, a journey of about two hours, where she is perfectly free from the disease. If at any time during the summer months she returns to her home she again suffers, and is again relieved when she reaches the summit of the mountain. She takes no medicine, nor does she change her mode of living. It is simply the change of location that produces these results. At any other season of the year she can visit her home without the slightest inconvenience. These conditions have obtained for the past twenty years. Can any one claim with reason that the nervous system can make these sudden changes from health to disease in this surprising fashion? The streptococcus must indeed be a "lightning-change artist" if he can appear on and disappear from the stage in this remarkable manner. This case is not exceptional, but typical. Can any one say with truth that the nervous system alone is responsible for these varying conditions?

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*This paper came to the Lancet in the form of a communication, but owing to its length it is printed as an article.—Editor.

A distinguished scientist has said recently that truth cannot be reached in any field without considering all the facts involved; that every fact is important if we would reach the truth. Your conclusion has been reached without considering all the facts. You have ignored the facts stated above in regard to dust and pollen. You have ignored the fact that reliable and trustworthy rhinologists have reported from 50 per cent to 80 per cent of cures by means of nasal surgery. To be absolutely sure of your ground you cannot afford to ignore one cure produced by this means. One well-established fact which cannot be included in a theory will demolish it. For this reason the dust theory will not stand unaided. Neither will the nervous theory, nor the nasal-disease theory. If dust were the only cause then all persons exposed to it would have hay-fever. If nasal disease were the sole cause, all catarrhal subjects would suffer. If the nervous element were alone responsible then all neurotics would be similarly afflicted. To account for all the facts observed in connection with this disease requires a combination of all these theories. This gives a foundation broad enough to support every fact observed. They are all equally important in the etiology because they are all necessary to produce an attack. Therefore when you say that "It is unjust to claim a peripheral irritant as the important element," I agree with you. The nervous element is just as important as the others. But when you say that "It may be, in a limited number of cases, an hypertrophied mucous membrane acts as a provocatant," I cannot accept it. The neurotic and nasal elements are the permanent ones, while the provocatant, or the one which calls forth the attack, is the dust or the recurring one.

For the past eighteen years I have made it my daily task to investigate diseased conditions of the nose. I have studied these conditions carefully in a large number of cases of hay-fever and asthma, with the result that I have found some pathological state present in every case. When any one brings me a case in which nasal disease is not present, then I shall reconstruct my theory so as to include this new fact. A failure to cure any case by complete removal of the nasal disease would also necessitate a reconstruction of the theory. I do not maintain that such an event is impossible, but I do believe it to be very improbable. If the neurotic element is essential to the production of a paroxysm, and if the pathological changes in the nervous system are known and removable, then the percentage of cures of hay-fever by the neurologist will indicate exactly his percentage of efficiency in the treatment of neurotic conditions. As far as my knowledge goes, these changes are not definitely known, and hence the neurologist is excusable for a large percentage of failures. We do not expect him to cure many cases. The same test applies to the rhinologist. If the nasal element is an essential one, and this is more than probable, the pathological conditions being known and removable, the percentage of cures performed by him is an exact indicator of his efficiency in treating nasal disease. From this point of view it is very interesting to note the percentage of cures reported by the leading rhinologists. The successful removal of the nasal disease then must throw a flood of light upon the main issue, which is the permanent cure.

In regard to treatment, you say that "The time to treat all such diseases is long before the expected outbreak." I should modify this by saying the best time, etc. As I have succeeded in arresting the paroxysm in several cases by the removal of hypertrophied tissue during the attack, I should advise treatment at any time, but preferably during the intervals between the outbreaks.

Again, you state that "The success of such treatment will depend upon the possible repair of the foundation." With this I agree perfectly, but I think you must admit that your foundation is too narrow to support the whole structure or to account for all the facts. The foundation which I have outlined gives us at least two avenues of attack, one through the nervous system and another through the nasal disease. It would seem that these two methods might be combined with the most happy results. For this reason I would like to ask you to give, through the columns of your valuable journal, a detailed description of the pathological conditions present in the nervous system of the hay-fever and asthmatic patient, and the method of treatment which will remove them. I must acknowledge that I know very little about this, but I am anxious to learn, and I know of no one better qualified to elucidate this part of the subject than yourself. If you can outline a plan of treatment which will give as certain results with less inconvenience or loss of time to the patient than the one I have described, I shall be the first one to accept it. Until this is done I shall continue curing hay-fever and asthma by removing the nasal disease.

In closing, I wish to thank you for your criticism. Karl Pearson very truly says that "Criticism is the life-blood of science." The earnest investigator always welcomes criticism from any source, and especially when it is adverse. One adverse criticism is worth a hundred favorable ones, particularly if it be buttressed by good, sound reasoning. If, therefore, any one has an adverse criticism to make on my paper, I should esteem it a favor if he would make it public through the columns of the Lancet.

Since the above was written, I have read, in the Lancet of Feb. 15, a so-called criticism upon me and my statements, but such a communication hardly comes within the pale of criticism as defined, for instance, by Prof. Ernest Carroll Moore, of the University of California, who says: "The genuinely educated man is not one who has merely passed through a great many experiences or made the acquaintance of a wide range of men and things; but, rather, the one who has formed the habit of consciously using the experiences which he has already had, be they few or many, in testing the new experiences which come to him. The habit of treasuring up past experiences and consciously using them, is what we mean by criticism." Experience, then, is the touchstone of criticism.

No. the communication did not reach this standard, but, rather, was a weak attempt at ridicule, supplemented by some very indefinite and questionable statements. The latter require brief notice.

For example, the writer says: "Upon a hyperemic and hyperesthetic area, any irritant, any stimulus acts with violent results." This is contrary to the experience of all hay-feverites, and therefore is not true.

The statement that "It is physically impossible that intrinsic pressure should result where there is extrinsic room" is very obscure as to meaning, and probably intentionally so. If he means that there can be no pressure on terminal filaments of the nasal nerve without pressure against the septum by the hypertrophied turbinates, the statement is not true. In the first place, I have never seen such a condition. A reprint just received from Dr. Pynchon, of Chicago, a well-known and reliable specialist, reports practically the same experience. Even granting that there is no such condition, it is still perfectly possible to get pressure upon these nerve filaments by the proliferation of the elements of the superficial layers of the mucous membrane, especially of the connective-tissue cells forming the basement membrane. This process often results in the formation of connective-tissue fibres, the pressure of which is frequently sufficient to destroy the function of the nerve cells entirely. The distribution of the terminal nerve fibres is such that this condition might easily obtain.

The question about the effect on the disease of different parallels of latitude has been fully answered in a previous communication.

The proposition that "There is a peripheral, a distributive and a centric field to be considered in the study of this disease," is too vague to call for any discussion.

The statement that "Hyperemia always tends to hyperesthesia," is contrary to all authority and to every individual's daily experience. Pathologists tell us that "Many of the mucous membranes are physiologically subject to periodic hyperemia. The blood supply of the alimentary canal during digestion and of the uterus during menstruation is strikingly increased." Again, "Inflammation is always pathological, destructive in the sense that structural modifications impair function. Hyperemia, on the other hand, is oftener physiological, as it is an essential element in repair, and accompaniment of functional activity."

Every person who goes from a warm room into the cold air has first a contraction and then a relaxation of the blood vessels of the nasal mucous membrane, and consequently a hyperemia of it. Long-continued thinking will produce hyperemia of the brain. Vigorous exercise of a muscle will make it hyperemic, and so on. The most elementary knowledge of physiology and pathology ought to have prevented any such expression. The experience of the most careful observers points in another direction. Long-continued hyperemia will produce hypertrophy, and the pressure caused by this will produce hyperesthesia. As the removal of the hypertrophy will cause the disappearance of the hyperesthesia, there seems to be a pretty solid foundation for this hypothesis. Such expressions as "lines of least resistance," "Disordered chemical qualities of the body fluids," "Inherent instability in the nerve tissue itself," "A neurotic quality, an impaired metabolism, faulty elimination, nerve tire, etc.," are entirely without meaning in the connection in which they are used. It is this kind of language which caused Huxley to write, "Nature turns a deaf ear to honied words and high sounding phrases. It is only those who know the ways of things and can swiftly and surely make use of them who get any good out of her."

If the writer of this letter desires to be of service to the readers of "The Lancet" by aiding in the establishment of the truth in regard to hay-fever and asthma, let him report his experience, personal or otherwise. Let this be done in language which can be understood by the ordinary reader. Talleyrand once said, "Language was given to man to conceal his thoughts;" and it would seem to be true in many instances. Let us have definite statements supported by facts. In other words, let us have fewer dog stories and more experience.

DEADHEADS

The X-Ray Journal says the origin of the word "deadhead" is explained as follows: Fifty years ago the principal avenue of Detroit, Mich., passed close to the entrance of the plank-road leading to Elmwood Cemetery. As this cemetery had been laid out some time previous to the construction of the road, it was arranged that all funeral processions should be allowed to pass along the latter free. One day, as Dr. Pierce, a well-known physician, stopped to pay his toll, he observed to the gatekeeper: "Considering the benevolent character of our profession, I think you ought to let us pass free of charge." "No, Doctor," replied the gatekeeper; "we can't afford that. You send too many deadheads through here as it is." The story traveled around the country, and the word "deadhead" was eventually applied to those who obtained free admission to the theatre.

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DISEASE AND DEATHS AMONG CHRISTIAN SCIENTISTS

Judge Ewing, the national lecturer of the Christian Scientists, gave a very active demonstration of the "error of mortal mind" when he fell to the floor of the platform unconscious and hemiplegic while addressing an audience on the subject of science and health.

After he had partially recovered he explained to his anxious attendants that he had not been sleeping well of late, and was over-tired. An unfeeling newspaper intimated rather broadly that neither were the symptoms consistent with his teachings nor was he naturally frank in his statements when suffering from an actual disturbance of his "gray matter."

Observation has shown that hemiplegia is a very difficult "error" for the scientist to treat. The healer affirms that the patient can walk and the aphasic can talk, but the patient labors under what is called "chemicalization" by the healer, and does not talk or walk well enough to get about or make himself intelligible.

A few months ago a patient who had been suffering from arthritis deformans was taken to the meeting-place to demonstrate her improvement by walking, something she had not done for a year. The patient was assisted to her feet, and, Christian-like, essayed to walk; but although her spirit was willing the flesh was weak, and she fell to the floor while the expectant audience murmured "keep this thought!" The pain-suffering woman, forgetting time, place and hearers, cried out, "Damn your thought, some one help me up!"

A prominent Christian Scientist in Lakota, N. D., died on Feb. 20th from pneumonia. Numerous instances of sudden illness and death among this sect are recorded by physicians who are called in at the last moment that the family may be able to secure a burial certificate without a coroner's investigation.

The time is coming when more deaths will occur among these people. It is neither safe nor wise to neglect one's self particularly during a period of great physical activity and mental strain. Even the healers feel the burden of frequent calls, night work and routine matters, and many of them are victims of colds, insomnia and fatigue, and they are obliged to leave their work for recuperation and rest.

THE TREATMENT OF PNEUMONIA

Every general practitioner has a specific for pneumonia, whether it be of the typical or atypical variety. Bacteriological science has done much to clear up the different types, hence it is universally recognized that the disease may be due to the pneumococcus, the streptococcus, the staphylococcus, the colon bacillus, the typhoid bacillus, and other bacteria, sometimes one and sometimes several. According to Billings the atypical form occurs in the course of some other disease or after a surgical operation, the temperature curve is remittent in type, the pulse usually rapid, and the respiration usually less rapid than in the typical variety. Pain, pleurisy and leucocytosis are not as commonly present. The sputum is not as uniformly present, and may be purulent and offensive, the duration is longer, and ends rarely by crisis.

The old-time jacket and poultice, as well as hot applications, have given way to more rational measures. Cold, in the form of ice-bags applied over and about the chest, has relieved pain, and assisted in reducing temperature, as well as to prevent the dangerous collapse of the crisis.

Antipneumococcic and antidiphtheric serum has been advocated, and it is claimed by those who have used serum successfully that the disease is modified. It is expected that a serum will be compounded that may prove as great a specific as that used in diphtheria.

Beechwood creosote, in from one to ten drop doses, or the same number of grains of guaiacol carbonate four to eight times in the twenty-four hours, and occasionally large doses of calomel have aborted an attack. The use of oxygen and strychnine is still a favorite remedy. Expectorants, sedatives, depressants and emetic drugs are often given indiscriminately, and much harm has resulted therefrom.

What a change has taken place in the past few years in diagnosis and treatment. The present common-sense line of therapy in pneumonia is rather heroic for the old-school practitioner, who still clings to the poultice, jacket, bleeding, purging and veratrum.

To intimate that a bacillus is the active factor in pneumonia is like flaunting a red rag in the eyes of an infuriated bull. Perhaps the old doctor has cured many pneumonias in his own specific way, due to whatever cause. If so, he still clings to the old, time-tried remedies, and if a few of his patients fail to respond to the treatment he is not far behind his advanced brother, who treats with all the latest remedies and loses a celebrated case. After all, in the larger number of cases, it is the individual, and his power of resisting the invasion of germs; and, if his former physical condition is not undermined by cardiac or renal disease, the doctor may do something to assist nature in her work of extermination and elimination.

SURGERY UNDER LOCAL ANESTHETICS

For the past few months but little has been written on intraspinal anesthesia, the subject having apparently been dropped by surgeons who considered it a passing fad and by other surgeons who wished to investigate for themselves before reaching a conclusion.

The Journal of the A. M. A. for February 22 has an interesting article by Dr. George Crile, of Cleveland, Ohio, on "An Experimental and Clinical Research into Cocain and Eucain."

A physiologic "block" is produced by the injection of cocain or eucain into a nerve trunk, which prevents afferent or efferent impulses from passing as completely as if the nerve were divided. The "block" is effectual enough to prevent electrical currents from forcing their way through. The action of cocain and eucain is practically the same although the former is rather more prompt than the latter.

Crile's experiments on dogs demonstrate the necessity of the surgeon's paying more attention to human physiology rather than devoting all of his time to surgical anatomy, either pathological or normal. For instance, it was noted that there were more or less showing of respiration and a temporary rise of blood-pressure when the vagus was irritated. Mechanical destruction of the vagi did not cause complete inhibition of the heart; division of one vagus had but little effect upon respiration or circulation.

Dogs under cocain or eucain showed a whole or partial suspension of the inhibitory function of the vagi, and manipulation of the intestines did not cause a fall of blood-pressure, and burning or destructive manipulation of various members of the body showed less disturbance of blood-pressure than in dogs under control.

The clinical use of cocain and eucain is attended by little if any shock, due to the blocking of all afferent impulses for pain, as well as the vasamotor, respiratory and cardiac mechanism.

Operations upon the lower extremities were successful by injecting a 1 per cent solution into either the external cutaneous, anterior crural or sciatic trunks. The area supplied by the ulnar nerve was frequently the seat of crushing injuries, and the nerve was easily cocainized at the elbow-joint.

The incision for an amputation of the shoulder-joint sufficed for the injection of cocain into the brachial plexus as well as the temporary closing of the arteries. The preliminary incision is preceeded by a hypodermic of eucain, 1-12 per cent, and in operations about the neck or larynx a hypodermic of atropin is employed for safety.

The pharynx and larynx were attacked for minor and major operations, and the results were so successful as to warrant the investigators to state that operation on the head and neck were rendered so much safer as to greatly increase surgical possibilities.

Dr. Rudolph Matas, of New Orleans, has performed a remarkable number of successful operations under cocain, and his monograph on that subject is interesting and brilliant.

Dr. C. A. L. Reed, of Cincinnati, in a recent paper, details thirty cases, including abdominal sections, curettage, reparative operations on the cervix and perineum, hemorrhoids, cystoscopic examination, and one case for the purpose of controlling irritable bladder. All of these cases were operated upon under spinal cocainization, and the "block" system was not employed.

Of the two methods the "block" system is preferable, on account of the minimum danger. All operators report more or less inconvenience when the solution is injected into the spinal canal, and in some instances alarming symptoms have occurred.

The subject has many attractive features and the Lancet hopes to report the experiments of a few of the local surgeons. Both systems have been used here, but as yet no positive conclusions have been reached. Surely, if goat's lymph can be injected into the spinal canal by an ordinary operator or nurse, a sterile solution of cocain can be used with equal safety.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MECIDINE

R. O. Beard, M. D., Secretary

Stated meeting, Wednesday evening, February 5, 1902, at the West Hotel, Minneapolis; the vice-president, Dr. J. W. Little, in the chair.

Dr. L. A. Nippert, of Minneapolis, presented a specimen of ectopic gestation, and made the following report of the case:

Five years ago, the patient had consulted Dr. Nippert for the relief of severe pain in the pelvis, persisting two or three weeks after confinement. He found an ovarian cyst, which was removed by Dr. W. A. Hall. The patient had disregarded instructions in the matter of rest, and a hernia resulted, which gave some annoyance. Recently the patient had returned with a report of irregular and disordered menstruation, and suffering pain, upon urination, of a paroxysmal tearing character. A slight continuing flow from the uterus was present. The uterus was curetted. No tumor was discovered. The discharge of blood ceased for a few days, and then returned. Pain upon urination recurred sharply three days ago, and extended to the intervals between acts of micturition. Upon examination a soft mass was found in the right cul-de-sac. A diagnosis of extra-uterine pregnancy was made. Dr. Hall had operated to-day. Patient was doing well. The specimen showed part of the cicatrix of an old incision, and the tube containing fetal and decidual structures, but no fetus. A few blood clots and fluid blood were found in the abdominal cavity.

Dr. C. H. Mayo, of Rochester, read a paper upon "Prostatectomy," of which the following is an abstract:

Abstract of Dr. Mayo's Paper

Prostatic surgery has developed from suprapubic cystotomy. Statistics should be considered only in a general way as representing the developing stage of prostatic surgery. Most writers upon the subject of prostatic surgery have advanced some special method of operating, regardless of conditions and indications.

One-half of the enlarged prostates can be reached either from above or below equally well, one-fourth better from above, and one-fourth better from below; and a few will require a combined operation. The method of operation is influenced by the condition of the gland, and by other known and ofttimes unknown conditions.

The lateral lobes are glandular and encapsulated, the middle may be glandular and encapsulated, or a muscular bar, or hypertrophy of mucous glands and bladder tissue.

There are some known conditions which influence our choice of operation. The fleshy individual with thick perineum, long prostatic urethra and high-lying prostate, is one for suprapubic or combined operation. Large dilated bladders are easily reached from above, and small, contracted bladders more easily from below. Those with stone present and enlarged prostate are best made from above. We also have cases of symptomatic stone not found by search, and emergency operations made in the country; and these are the cases in which the suprapubic incision is the most satisfactory. Those with cystitis and old, acute secondary changes in the testes will often improve from castration. We still have a large class of prostatic sufferers in which there are no symptoms of stone, little or no cystitis and short perineal distance, in which a perineal operation is unqestionably the better method. The ease of operation, perfect drainage, and earlier recovery in chosen cases no doubt justify this choice. The special retractors of Syms and Ferguson much simplify the accessibility of the gland from below, and it is quite possible from present indications that this method will be developed into the operation of the future by making earlier diagnosis of conditions and operating before these cases reach the stage of necessary suprapubic incision.

The danger of uremia in those who have high-tension arteries, quick-closing heart-valves, and contracted kidneys, which secrete two-thirds of the twenty-four hour, low specific gravity urine at night, is greatly to be feared. Our general examination must be thorough enough to establish a fairly accurate ratio between the disability on the one hand, and the dangers to be incurred and benefits to accrue from operation, on the other.

Before suprapubic operation, a hypodermic of morphia is given to reduce the amount of anesthetic. Usually chloroform is indicated, but ether preferred. Trendelenberg's position, with air inflation of bladder and finger enucleation of enlargements after incising capsule, is preferred. Suprapubic drainage, by closing the bladder over tube by Witzel's method, is followed. The usual perineal operations are the median and curved transverse. The incision is deepened to reach the gland capsule, which is incised, and the enucleation completed with the finger and hook retractors. A No. 16 sound passed through the urethra serves as a guide, and depresses the lobes of the gland within reach. The prostatic cavity is packed with gauze and a tube drain of the bladder brought out of the wound.

Discussion of Dr. Mayo's Paper

Dr. F. A. Dunsmoor, of Minneapolis, opening the discussion, said that he had done partial prostatectomy successfully. He believed there were reasons for caution in the performance of this operation. As the author has said, it is an operation of age. The condition is associated with inflammatory disturbances in the urinary tract. Such patients are notoriously bad anesthetes. The essayist had referred to the use of the catheter. It is a common conception that resort to this means of emptying the bladder is crossing the danger-line.

Prostatectomy is a tempting offer and an operation likely to become popular. It should be undertaken before the bladder becomes infected. He favored the subpubic operation. Dr. H. C. Wyman, of Detroit, had said two years ago that transverse subpubic section, slitting the capsule, without removal, had secured relief. This may prove to be unsatisfactory in its results. Of course, prostatectomy offers a permanent cure. It is a safer measure than the Bottini operation.

Dr. R. E. Cutts, of Minneapolis, asked Dr. Mayo how carefully he had investigated the bladder for stone in doing perineal prostatectomy.

Dr. H. B. Sweetser, of Minneapolis, said that he believed perineal prostatectomy to be the operation of the future. If done quickly it is as easy and as safe an operation as prostatotomy. Better drainage is had from below. He had made the transverse-curved incision in a recent case. The bladder was easily explored, and many stones were present and were removed. They are often found along the wall and not all at the base of the bladder. The mortality, he had found, in a large number of cases reported, to be only five per cent. He would prefer in all cases this method of operation. Dr. Fergusson, of Chicago, had reported a large number of successful operations. Dr. W. J. Mayo had lately discussed a method of illumination which had been satisfactory.

Dr. J. W. Little, of Minneapolis, cited a case of enlarged prostate without a serious clinical history, excepting suprapubic pressure, and pain and slowness of urination. He had advised against operation, which, however, had been done by another surgeon later. He would question the correctness of his advice. He said in Germany recent reports showed little prostatic surgery, but that the practice of prostatic massage was in favor. He doubted if any positive conclusion as to method or point of operation could be drawn as yet. He thought that easy as a suprapubic operation is, it would prove preferable in many cases.

Dr. C. H. Mayo closed the discussion. He thought the danger of infection no greater in the suprapubic operation. In difficulty of technique there is little choice between the suprapubic and perineal operations. Theoretically, where stones and cystic infection are present, the latter method would seem desirable, although his best successes had been achieved by the suprapubic route. These cases are tolerant of operation, but show degenerative changes later. Prostatectomy is in an advancing stage, and statistics, therefore, cannot be trusted fully. He cited certain points of operative detail and certain differences of prostatic enlargement.

Dr. J. W. Andrews, of Mankato, referred to a cure of prostatic enlargement by castration, and inquired as to Dr. Mayo's experience.

Dr. Mayo said that a few years ago he had performed certain castrations, some of which had been successful with more or less permanence. Cases of unilateral atrophy of the prostate with tubercular disease of one testicle had been noted. In the presence of diseased testicles, castration should be considered.

Dr. J. L. Rothrock, of St. Paul, read a paper entitled "Stricture of the Rectum due to Inflammatory Conditions in the Pelvis."

Dr. W. A. Dennis referred to case cited by Dr. Rothrock. In the early history malignancy was considered. The rectum appeared as though bored through a solid block of wood. At a recent date he had had occasion to examine the patient and found the exudate almost entirely removed.

Dr. C. H. Mayo said that in some cases, even low down, it is dangerous to dilate these strictures. In the doing of the work the finger is a trusty organ of dilatation. He cited a case of forcible dilatation in which the patient had gone rapidly into collapse after operation and died. Often it was better to deal with these cases higher up.

Upon motion the Academy adjourned.

HENNEPIN COUNTY MEDICAL SOCIETY

A. E. Benjamin, M. D., Secretary

A stated meeting of the Hennepin County Medical Society was held at their rooms, in the Andrus Bldg., Feb. 3, at 8 p. m.

Dr. Dunsmoor reported a case of a woman 65 years of age, whose arm he amputated last week. It was an operation which removed the outer two-thirds of the clavicle, the pectoral muscles, and the scapula, as well as the arm. This operation was for a tumor involving the head of the triceps muscle, and he thought an operation would give the woman some relief and a chance of prolonged life. Dr. H. L. Williams gave a pathological report of the case. He had made a dissection of the arm, and found large nodules at the inner head of the triceps muscle. There were multiple ones in the intermuscular fascia, and they seemed to have distinct capsules, and they could be torn out easily. The section under the microscope was from the large nodule. It showed a typical spindle-cell sarcoma. The other portion resembled a fibromyoma. The portion from the periosteum presented a round-cell sarcomatous growth, mostly. Dr. Mann had prepared a specimen in celloidin, and the others were frozen sections.

Dr. J. E. Moore reported a case of diseased gall-bladder. The patient was an athletic young man, about 32 years old. The case had been referred to him by Drs. Bell and Head, last November, for operation. The man gave a history of attacks of acute lancinating pain in the epigastric region. A tumor was felt, resembling carcinoma of the pylorus. A gastric ulcer was thought of, but the only diagnosis Dr. Moore made, was a perigastritis. When the patient was lying flat on his back, the tumor could not be felt, but when the patient was on the left side, the tumor seemed to fall to the median line. An exploratory operation was made in the median line, with the hope that relief would be secured. The gall-gladder, stomach and omentum were found adherent. Dr. Moore said he was not familiar with this class of cases, but had seen some reference to it in Kerr's book. Gall-stones were found in the gall-bladder, and it was supposed that they were all removed, as a careful examination revealed the presence of no others. The common bile-duct was examined, but no more stones could be found. The gall-bladder was drained through the median line, but no bile escaped from the opening after the operation. A mucous secretion continued to be discharged. For the purpose of removing the gall-bladder, a second operation was done a few days ago. This was also done through the median line. After the sinus was disinfected and sealed up, the gall-bladder was removed, and a stone was found in the cystic duct near the common duct. This was shown in the specimen which the doctor presented to the society. The cystic duct was also removed, and there was found an inflammatory deposit, as well as a stone, which prevented the flow of bile. It took about one hour to do the operation, and the wound is now healed.

Dr. Hoegh showed a case to the members of the society, which was similar to a second case he had seen ten days previous. He considered them rare, as he had seen but these two that he remembered. The case was a man between 35 and 40 years of age, who gave a history of a tumor starting on the arm (eleven years previous) on the lateral aspect near the furrow of the biceps muscle, beneath the skin. This tumor was originally about the size of a pea, and had been growing ever since, and others had occurred along the lateral aspect of the arm. Others appeared later on the right arm, and continued to form on the lower extremities. These tumors ranged in size from that of a pea to that of a walnut. Some were elastic, soft and lobular. He considered them fibrolipomata, and thought them sufficiently rare to exhibit the case. He considered it possible to diagnose them as molluscum fibrosum, but he hardly thougnt they were sarcomatous. Molluscum fibrosum is usually associated with tumors of the nerve sheaths. He expressed his willingness to have any one suggest a method of treatment. He thought it was out of the question to remove them, for there were forty or fifty in all. He had injected one of them ten days ago.

Dr. Nippert asked if he did not think that sarcoma could be excluded on account of the length of time they had existed. Dr. Hoegh thought these tumors might exist ten or fifteen years, and later show positive sarcomatous growth. Dr. J. Clark Stewart thought no treatment was necessary, but believed them to be pure fibromata. He had seen many removed, and had made microscopical examinations. Dr. Dunn reported having seen four cases in the past few years. He thought they might be either fibrolipomata or fibromata, or they might be mixed. Dr. Moore reported having seen three daughters in a family who exhibited similar growths. He had performed hysterectomy in one, on account of the growths extending to the uterus and broad ligaments. A letter from a surgeon in San Franisco, who had seen one of these cases, reported having removed from the abdomen a growth similar to the one which Dr. Moore removed. This was undoubtedly a sarcoma.

Dr. Abbott reported a case of a woman who exhibited signs of appendicitis. Another physician had seen this case and had diagnosed some tubal trouble, but no appendicitis. The condition found at operation was quite a large flat mass at the end of the right tube, with evidence of inflammation between the tube and ovary. There were adhesions between the cecum and the frimbiate extremity of the tube. An endeavor was made to remove the appendix in one mass, but adhesions were too great. There was no evidence, macroscopically, of appendicitis, but dense adhesions had formed around the appendix. He considered this a case in which infection had occurred from the end of the tube, causing local peritonitis.

Dr. J. W. Little then read a paper entitled "The Time to Operate in Appendicitis." This paper appears on another page of the Lancet, with the discussion as reported by the secretary of the society.

Dr. Nippert's paper, announced to be read at this meeting, will be read at the April meeting.

BOOK NOTICES

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M. D., New York City. Volume III. Illustrated by Chromolithographs and Six Hundred and Seventy-Six Half-Tone and Wood Engravings. New York: William Wood & Co.

We have had the gratification of receiving former volumes of this work, and then expressed the opinion that the work was the desideratum of the general practitioner. The multiplicity of the subjects, and the advanced manner in which they are treated, tend to lend to each volume as it is issued a value that is intrinsic. On completion of the new edition, the fortunate owner will have a small library complete in six volumes—one in which he can depend upon finding a synopsis of nearly every subject connected with the medical profession. While the articles are necessarily short, yet in their conciseness, they are not found wanting in the essentials.

Howard Lankester.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, M. D., LL. D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital of Philadelphia. Physician to the Philadelphia Hospital for Diseases of the Skin. Member of the American Medical Association of the Pennsylvania and Minnesota State Medical Societies of the American Academy of Medicine, and of the British Medical Association. Fellow of the Medical Society of London. Fourth Edition, Revised and Enlarged With Chromogravure Plates and other Illustrations. New York: D. Appleton & Co.

The present edition, the fourth, of this popular work has been revised and modified to meet the advances of the past few years. The influences of parasites has been zealously studied, as well as new points in symptomatology. The volume contains a few chromogravure plates and other illustrations. The important part of the book lies in the improved methods of treatment. The formulary following the reading text covers over one hundred pages, and there are many formulæ under each chapter. If one is expert in skin diagnosis he need not be at a loss for treatment.

The indexes are full and the book itself is very attractive.

A System of Practical Therapeutics By Eminent American and Foreign Authorities. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Jefferson Medical College; Physician to Jefferson College Hospital, etc., Philadelphia. Vol. III. New (2d) edition, thoroughly revised. In three very handsome octavo volumes, containing 2,593 pages, with 427 engravings, and 26 full-page colored plates. Per volume, cloth, $5.00 net; leather, $6.00, net; half morocco, $7.00, net. Philadelphia: Lea Brothers & Co.

This volume contains many chapters of interest to the surgeon as well as the general practitioner, such as "Anesthesia and Anesthetics" by Chas. Lester Leonard; "Surgical Technique," by Chas. H. Frazier; "Minor Surgery and Bandaging," by Geo. W. Spencer; "Fractures and Dislocations," by Henry R. Wharton; "Cerebral Concussion and Shock," by Joseph Ranschoff; "Pleural Effusion and Empyema; Abscess and Gangrene of the Lung," by A. J. McCosh; "Peritonitis, Non-operative and Post-operative, Appendicitis, Paratyphlitis and Abscess, and Ostruction of the Bowels," by Geo. Ryerson Fowler; "Obstruction of the Intestines," by Edward Martin; "Diseases of the Rectum and Anus," by Joseph M. Matthews; "Therapeutics of the Male Genito Urinary Tract," by Wm. T. Belfield; 'Therapeutics of the Genito Urinary Diseases of Women," by Ed. E. Montgomery; "The Therapeutics of Pregnancy, Parturition, and the Puerperal State," by E. P. Davis; "Diseases of the Eye and Their Treatment by the General Practitioner," by Casey A. Wood; "Diseases of the Ear and Their Treatment by the General Practitioner," by S. MacCuen Smith; "Diseases of the Nasal Chambers and Associated Affections," by E. Fletcher Ingals; "Diseases of the Uula, the Pharynx and Larynx," by D. Braden Kyle. A glance at the subjects with the writers, each a specialist, is sufficient to stamp the volume as particularly valuable.

The illustrations are profuse, and each subject is exhaustively treated within reasonable limits. The fortunate possessor of the three volumes has a library of great value.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. Werrick, of Chrisholm, expects to remove to Hibbing, Minn.

Dr. E. F. Jones, a graduate of Rush, has located at Roscoe, S. D.

Dr. M. C. Millet, of Rochester, Minn., is visiting hospitals in the east.

Dr. G. McIntyre, of Mayville, N. D., is studying in the hospitals of Chicago.

Dr. J. E. Ragsdale, formerly of Marshall, Mo., has located at Belgrade, Montana.

Dr. M. B. Halldorson, of Kensel, N. D., has located at Souris in the same state.

Dr. Henry Wiedow, of Iowa City, Iowa, has decided to move to Round Lake, Minn.

Dr. C. M. Shanley, of Lidgerwood, N. D., is in Minneapolis studying in the hospitals.

Dr. G. N. Butchart, of Hibbing, Minn., has accepted the position of mine physician at Palmer, Mich.

Dr. John Habenicht, formerly of Minnesota Lake, but late of Chicago, has located at St. Killian, Minn.

Dr. R. D. Melvin, of Parker, S. D., has returned from Chicago, where he spent a month in special work.

The citizens of Bemidji, Minn., want Dr. A. E. Henderson for mayor, but the doctor does not want the office.

Dr. Daniel Kriedt, of Marietta, Minn., has accepted a position in the hospital for the feebleminded at Faribault.

Dr. R. D. Campbell, of Grand Forks, N. D., is in New York looking through the hospitals for new ideas.

Dr. B. L. Pampel, of Livingston, Montana, is spending six weeks in Chicago doing postgraduate work.

Dr. D. N. Reber, of Hamilton, Montana, is studying in New York, where he will remain until May 1.

Dr. Geo. S. Lesher, physician at the Flathead Agency, Montana, has resigned, and has gone to Murray, Idaho, to begin practice.

Dr. R. W. Tennant, who graduated with the class of '99 at the State University, has located at Brookings, S. D.

The State Board of Medical Examiners of Washington, is prosecuting several physicians who are practicing in that state without a license. The west is a warm place for such men.

Dr. D. C. Rood, of Hibbing, Minn., was in the Battle Creek Sanitarium at the time of the recent fire. Dr. Rood lost all his clothing and other valuables.

Dr. G. A. Stevenson, of Albert Lea, Minn., announces that he has given up general practice to devote his entire time to eye, ear, nose, and throat work.

The Samaritan Home, the old-established hospital at Waterville, Minn., was completely destroyed by fire last month, the loss being over $17,000, with an insurance of only $10,000.

They want to make Dr. Wheeler mayor of Grand Forks. His election would be notice to bandits and other bad men to keep away from that city.

Dr. P. H. Munger, after practicing nine years in St. James, has decided to locate in Nicollet, Minn. The local press speaks in high terms of Dr. Munger, both as a physician and as a man.

Dr. E. A. Pray, of Valley City, N. D., is studying up automobiles with a view of purchasing one for his practice. He is now in New York studying in the hospitals.

Dr. J. M. Grassick, of Buxton, N. D., has gone to Chicago for special study. Dr. Halliday, of Reynolds, is taking care of his practice in his absence.

The Minneapolis Board of Education has decided to take no action this year in the matter of examining the eyes of school children, as suggested by the Hennepin County Medical Society.

Mitchell, S. D., is to have a new hospital. A stock company has been organized, and it is proposed to raise $10,000 for a building. Dr. B. A. Bobb, of Mitchell, is the president, and Dr. W. E. Crane, is the secretary, of the company.

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ACUTE ENDOCARDITIS*

By JAMES B. HERRICK, M. D.

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CHICAGO

The title of this paper is perhaps misleading in that it is too comprehensive. It is not my purpose to treat the topic of acute endocarditis from the standpoint of bibliographic or experimental research, or of a statistical analysis of my own cases, but to bring out a few points conerning this subject, the importance of which points has been more and more impressed upon me by reading and by clinical observation. These points are not new; and my excuse for bringing before you old truths is that facts become well known and the common possession of the profession only when they are often repeated, or are emphasized, or are presented in a new light. Let this suffice for introduction, though I must not omit to thank this society most heartily for the courtesy of the invitation to meet you and address you.

ENDOCARDITIS COMMONLY SECONDARY

Lænnec's description of acute endocarditis is meagre. Bouilland, in 1837, first accurately differentiated between a mild form often associated with rheumatism and a grave typhoid form, "*endocardite typhique.*" Virchow's studies on embolism and thrombosis made clearer the embolic phenomena attending endocardial lesions; and with the advent of bacteriology the pathogenesis and clinical manifestations of the disease were still better explained. The first recognition of micro-organisms on the valves seems to have been by Winge and Heiberg, of Christiania, in 1896. Winge, in 1869 (*vide* Harbitz, *Om Endokardit,* page 4), demonstrated, before the medical society of Christiania, specimens of what he regarded as parasitic valvular vegetations. In 1872 Heiberg published, in *Virchow's Archiv,* Bd. 56, the report of a case of puerperal ulcerative endocarditis with micro-organisms on the valves of the heart, and he used the term mycosis endocardii. Soon numerous reports of the finding of the ordinary pyogenic microbes and of the pneumococcus, the gonococcus, the diphtheria bacillus, etc., followed, until now it is generally admitted that the acute inflammation of the valvular endocardium may be due to the local action of any one of several different micro-organisms. Whether toxic substances may produce acute endocarditis is not so definitely settled.

This being the case, we may assume that these organisms must have a portal of entry into the circulation; in other words that the endocardial localization is a secondary process. This seems a simple statement to make, and it is; but it is one of the well-known facts that I would emphasize, because it is important and because, like many other simple and well-known facts, it is so often lost sight of in practice. Occasionally the point of infection is undiscoverable,—the infection is cryptogenetic,—but a careful search usually rewards us by the detection of a suppurative middle ear or gall-bladder, a chronic osteomyelitis, a phlegmon, a gonorrhea, a scarcely resolved pneumonia, a dysentery, or an infected uterus, making the clinical picture more complete and the course of the disease more clearly understood. And from the reverse point of view the fact is of as great importance. Given, a rheumatism, a scarlet fever, a suppurating corn or hemorrhoid, an acute osteomyelitis, a pneumonia, or a puerperal sepsis, and it becomes our duty to watch the valves of the heart most carefully, not only for the sake of scientific accuracy in diagnosis, but because of its bearing on prognosis and treatment.

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*Read before the Hennepin County Medical Society, Minneapolis, March 3, 1902.

BENIGNANT AND MALIGNANT ENDOCARDITIS

Since Bouilland's time two types of cases have been recognized, the vegetative or benignant, and the ulcerative or malignant; but neither anatomically nor clinically can a sharp line of demarcation be drawn separating the one group from the other. There are striking differences between the appearance of the vegetative form, with its innocent-looking little warty fringe parallelling the edges of the valves, and those of the ulcerative form, with massive excrescences, crater-like excavations, perforated valves, and purulent coating. And the contrast is as striking clinically as anatomically, between the extremes of a faint cardiac murmur, with little or no disturbance in the cardiac force and rhythm and insignificant constitutional disturbances, and the fulminant type, with its chills, irregular fever, prostration, typhoid state, embolic phenomena, and rapid death. But between these extremes are to be found all degrees of anatomical alteration; and the one form shades imperceptibly into the other, clinically, so that one must often be content to speak of an acute infectious endocarditis or of an acute endocarditis, with mild or severe manifestations as the case may be. If it were possible to recognize the micro-organism that was at fault in a given case, it would be a more scientific classification to speak of a pneumococcic, a streptococcic, a gonococcic endocarditis, etc. Yet, until this is possible, it is wise from the standpoint of prognosis and therapy to recognize two types of the disease in the same manner that we often speak of scarlet fever as extremely light in one case or malignant in another, though believing the disease in the two cases to be primarily of the same nature, but modified by greater virulence or number of organisms, by lessened resisting power on the part of the patient, or by failure to eliminate toxins. So, while it is well to preserve the expressions ulcerative or malignant in connection with endocarditis, it must be remembered that the terms are used rather loosely in an anatomical sense and also, to a certain extent, in a clinical sense.

PROGNOSIS IN ULCERATIVE ENDOCARDITIS

This naturally brings up the question of prognosis. It is good so far as life is concerned in the benign form; bad or fatal in the malignant. Or, to put the statement in another way, it is often said that, if the patient recovers, the case was one of the benignant or vegetative form; if he dies, it was malignant or ulcerative. This is making our disease fit a definition,—always a pernicious practice. Now, one has a right to question whether an acute endocarditis, with irregular fever, chills, petechial spots, and bacteria in the blood, is of necessity fatal. We may question on the ground of *a priori* reasoning, of clinical observations, and post-mortem findings. Some severe cases of septicemia, in man as in lower animals, recover. Puerperal sepsis, though virulent, is not necessarily fatal. Pneumonia is often accompanied by bacteriemia, by metapneumonic localization, and yet recovery may follow. While one realizes the added seriousness that is due to the establishment of a focus of microbic multiplication and toxin formation in the very center of the vascular system, from which center organisms and their products are swept out freely into the circulation and disseminated to the most distant parts of the body; and while one understands fully the gravity of the mechanical interference with the valvular and muscular mechanism of the heart that often accompanies an acute endocarditis, one must still feel that it is possible, even here, for the body to resist, for the inflammatory process to subside, and for local healing and constitutional recovery to ensue. This is borne out by clinical observation. There are records in the literature where competent observers have had cases with the typical symptoms of acute endocarditis of the so-called ulcerative type,—chills, irregular pyemic fever, petechiæ, visceral embolic phenomena, bacteria in the blood; and recovery has ensued with the exception of some mechanical lesion due to the scarring of the valve. These cases are exceptional, to be sure. This complexus of symptoms usually means death, but recovery may occur. Let me cite, briefly, two or three cases; and I have abstracts of over thirty from which to select.

A. E. Roussel (Med. Record LIX, 1901) reports the case of a woman who, following a miscarriage, had a foul uterine discharge, then continued fever, with occasional spells of subnormal temperature, chilliness, sweats, pains in various parts of the body, great emaciation. The heart became tumultous, its area of dullness increased, systolic apical and basic murmurs appeared, the pulse was often irregular and as high as 148, there was a dull pain and a feeling of oppression in the region of the heart. The red corpuscles were reduced to 3,000,000; hemoglobin was 35 per cent; leucocytes, 26,000; streptococci were present in the blood; and several subcutaneous abscesses containing streptococci formed. After twelve weeks, the patient recovered. Examination six months later showed a gain of 25 pounds in weight, freedom from fever, cardiac hypertrophy, and persistence of endocardial murmurs. Here was a case of puerperal sepsis with valvular localization, and symptoms commonly regarded as those of endocarditis of the malignant or ulcerative variety.

Dreschfeld (Allbutt's System, I, p. 632) tells of a patient in whom, after a severe bodily strain, signs of aortic leakage were found—evidently a rupture of the aortic valves. Sometime later the patient had symptoms of malignant endocarditis, —repeated chills, intermittent and high temperature (105°), and eventually embolism of the posterior tibial artery. The febrile symptoms subsided after a time, the patient regained his strength, and the diastolic murmur of the aortic regurgitation remained. In this case the valves, damaged by rupture, furnished the suitable nidus—the locus minoris resistentiæ—for the development of micro-organisms that in some way gained entrance to the blood. One is forcibly reminded of the experimental work of Rosenbach, who, by injecting micro-organisms into the circulation of an animal, was often able to get a localization on the valves of the heart if, before the injection, he had mechanically injured the valves.

Samson (The Practitioner, XL, p. 21) treated a woman for what he believed was acute ulcerative endocarditis affecting the mitral and aortic valves. She recovered, with the signs, however, of mitral and aortic regurgitation. Ten months later she suffered from symptoms similar to those he had observed in her first attack. She died, and the autopsy revealed ulcerative endocarditis. Samson regards the first attack as one of ulcerative endocarditis with temporary recovery.

I have seen a child of three with a pneumococcic septicemia starting with throat symptoms —a nearly pure culture being obtained from this locality—causing otitis media, bronchopneumonia, and acute endocarditis. Accompanying the latter condition there were an irregular temperature, a few chills with the temperature jumping from subnormal to 105°, two crops of petechiæ, a splenic infarction, and a long-drawn-out convalescence with persistent slight temperature, but with ultimate recovery of perfect health and with the signs, two years later, of a mitral regurgitation, muscular compensation being perfect. In conversation with several Chicago physicians of wide experience, I have found three or four who have seen cases which they regarded at the time as ulcerative endocarditis, and which had recovered. Surely, the number could be increased if all such cases were to go into print; but the impression still prevails that, unless a case called ulcerative endocarditis dies, there has been a mistake in diagnosis—an impression, as it seems to me, utterly without any rational basis, and an impression that should be corrected. But anatomical proof is not lacking. Autopsies have occasionally shown healed lesions of the valves that could have been due only to a destructive process that we must term ulcerative. My colleague, Prof. Ludvig Hektoen, has observed three such cases, drawings of which hearts he has kindly furnished me, and which I now show you. You notice that while an active process is going on in one part of the valve a perfect healing is seen in other parts, as in the beautiful specimen where the valve shows a large perforation with its edges smooth, firm, and scarred.

We must be convinced, I think, that in the acute endocarditis of the malignant type, even though the lesion of the valves is an ulcerative and destructive one, there is nothing inherent in the nature of the process that of necessity precludes healing and recovery. Our prognosis, therefore, while always grave in such cases, need not be absolutely hopeless.

DIAGNOSIS

The diagnosis of ulcerative endocarditis, like that of many other diseases, is generally simple if this disease is thought of and its evidences especially sought for. The difficulties, and hence the mistakes, depend upon three causes: (1) The disease is a great mimic of other diseases; (2) the primary disease may attract attention away from the endocarditis, which is secondary in its development, but, in reality, is of chief importance: (3) the secondary or complicating lesions may attract attention, and lead to the overlooking of the valvular disease.

1. The two diseases most closely mimicked by ulcerative endocarditis are malaria and typhoid fever. The recurring chills with periods of apyrexia, and the splenic tumor lead to the suspicion of malaria, particularly if the patient has lately been in a malarial district; but the failure to get prompt response to large doses of quinine, the absence of plasmodia from the blood, and the frequent presence of leucocytosis should cause one to look for some other cause than malaria, to explain the rigors and fever. The statement cannot be too often repeated that a malarial fever that does not yield to quinine properly administered, is to be looked upon as a mistake in diagnosis.

The resemblance to typhoid is often close. The onset may be gradual, the temperature remittent, the mental condition one of hebetude, and the spleen may be palpable. Only the careful study of the temperature, the absence of rose-spots, with which the small ecchymoses of endocarditis are not to be confounded, the absence of a Widal test, the frequently present leucocytosis, the presence in the blood of micro-organisms other than the typhoid bacillus, the cardiac findings, and the embolic phenomena enable one to make a positive diagnosis. Yet the question is a delicate one to decide when a patient with an old valvular disease has typhoid fever. This experience was mine in a girl of thirteen last summer, and it was only by the characteristic temperature-curve, the rose-spots, and the Widal test that a positive conclusion as to typhoid was reached.

Referring to this case makes me think of the importance of recognizing the fact that acute endocarditis is prone to attack valves that are sclerotic or are the seat of damage wrought by a preceding inflammation. When, therefore, an acute infectious process is evidently present in such a patient it must not be concluded at once that the valvular disease cannot be the cause of the new trouble because the valvular difficulty is of long-standing and has for years been quiescent. Rather, I think, should it be feared that there may be a localization of micro-organisms on the damaged valves, a lighting-up of an old process that has long been quiet, that may be the cause of the new outbreak of fever. During the past six months I have seen three such cases, one in a girl about 14, another in a girl of 19, another in a woman of 30. It was known in each case that a valvular disease of long standing was present; but it was the fact of its long standing and previous harmlessness, with the absence of dyspnea, edema, and other signs of cardiac incompetency, that had caused the heart to be disregarded in the attempt to explain the acute process. Typhoid fever was prevailing in Chicago at the time, and this, naturally, had been thought of, though in each case a careful study of the temperature showed a curve irregular for typhoid, though there had been chills, though there were petechiæ to the number, in one case, of 100 or more, and though in two cases emboli had been present in the spleen and in the third case had plugged a small vessel in the forearm, leading to sudden wrist-drop, pain, local change of color, and coldness, but not to gangrene. Death was correctly predicted in each instance, though the symptoms at the time were not immediately alarming, and the only thing that had caused anxiety to the friends was the protracted course of the fever. The subsequent course in each case, as the physicians have informed me, was typically that of ulcerative endocarditis. The rule regarding typhoid is a good one, i. e., not to regard a fever as typhoid fever until other diseases have been excluded, and the more positive symptoms of typhoid are present,—the spleen, spots, Widal, etc.

Ulcerative endocarditis often resembles pyemia or septicemia; but in reality it is pyemia or septicemia, and the only mistake made in these cases is overlooking, perhaps, the primary source of the sepsis and in not recognizing the valvular localization.

Special mention should, perhaps, be made of a form of endocarditis that is, from the clinical standpoint, rather puzzling. I refer to a form with a prolonged course and symptoms of a subacute or chronic type. Old valvular lesions are often present. The patient begins to "run down," losing gradually in strength and weight. He is not, until late, confined to the bed, but drags himself about, feeling all the time below par. There is a continued fever, seldom rising to a high point, often in the evening no more than 101°. This fever is quite irregular in its course. It may be overlooked by the patient himself. It may last for months. Occasionally there are slight chills; sweats may be annoying; and the patient grows pale.

Now the resemblance to tuberculosis can be most striking, and particularly in view of the fact that a slight degree of cardiac insufficiency may lead to a bronchial congestion and cough. Given, a patient with slight cough, progressive emaciation, anemia, rapid pulse, dyspnea on exertion, occasional slight chills, sweats, persistent, irregular temperature, perhaps even a slight hemoptysis, and one naturally thinks of incipient pulmonary tuberculosis, and may regard the murmur at the heart as accidental in character. A correct diagnosis in a doubtful case can be reached only by a close physical examination, with perhaps a careful watching of the patient for a week or more. Pus in any of the cavities of the body, like the pleura, gall-bladder, pelvis of the kidney, etc., must of course be excluded. And tuberculosis can be ruled out by the absence of the physical signs of consolidation in the lungs, and the absence of tuberculous disease in other parts of the body, such as bone, Fallopian tube, prostate and pleura, and by the frequent presence of petechiæ, leucocytosis, bacteria in the blood, emboli in spleen, retina, kidney, peripheral vessels, with the cardiac valvular findings that may suspiciously change in character from time to time. The diagnostic value of tuberculin should be remembered in this connection.

I have seen three such cases that I can call to mind. One case lasted about one year. Another, the wife of a physician, bore a remarkable resemblance to tuberculosis, and it was only by the method above suggested, viz., watching, with repeated examinations of the lungs, the sputum, the blood, and the heart, that we finally reached a positive conclusion as to the true endocarditic nature of her ailment—a diagnosis borne out by the subsequent tedious illness and death of the patient, numerous embolic phenomena being observed in the last few weeks of her life.

2. The primary disease may overshadow, in the mind of the physician, the condition of the heart. An unresolved pneumonia or a pneumonic empyema or arthritis may seem a sufficient explanation for the fever and chills; and so may a mastoiditis, a cholecystitis due to gall-stones, a gonorrhea with arthritis, an infected uterus, etc.

I need take no time in dwelling upon the diagnosis here. It consists, as already said, chiefly in thinking of the possibility of endocarditis in every case of acute infection, and of watching the heart closely, not being too ready to regard every murmur heard under these circumstances as accidental or hemic.

3. Again, there may be an overlooking of the endocarditis because attention is directed from the heart by the gravity of some complicating lesion, and the physician does not think to go back and inquire what is the source of the complication, or regards it as due to some other cause. A suppurating joint, particularly if in connection with gonorrhea or puerperal sepsis, may seem clearly understood without a careful interrogation of the heart. An acute nephritis may be due to septic infarction, and yet the preceding pneumonia, scarlatina, or exposure to cold be regarded as the cause and the valvular affection overlooked. An abscess of the liver may have its cause sought for elsewhere than in the heart; and a paralysis of an arm or leg or of one-half the body may be regarded as cerebral, which it may be, though it may be due to local embolic occlusion of an artery. The immense importance of an abscess of the liver, a suppurative arthritis, or an acute hemorrhagic nephritis, is apt to make one feel satisfied that he has discovered a sufficient cause for all the symptoms from which the patient suffers, and so the search stops just short of reaching the real cause of the trouble.

But what as to treatment? I shall not enter at all upon this topic. It would take us too far, and would lead to the confession that for endocarditis we have no known specific drug or method of therapy. But if the so-called benignant cases recover spontaneously, and if those with more malignant manifestations may sometimes get well, it behooves us, even in the desperate cases, to persist in our efforts to cure, and, to this end, to insist upon rest of the body and the heart; to get rid of the primary focus of infection; to treat untoward complications; to aid elimination; and to strive, by serum, ointment, drug, diet, and hygiene, and by improving the resisting power, to overcome the septicemia and toxemia that are taking the life of our patient.

The conclusion I would draw from this somewhat desultory consideration of an extremely interesting and important subject, is the old one of the necessity of understanding the pathological processes that underlie a disease.

DISCUSSION

By Dr. J. W. Bell—

I feel certain I voice the sentiments of every member of this Society when I say that we are deeply indebted to our distinguished guest for the eminently practical as well as scholarly paper to which we have just listened. The masterly manner in which the essayist has presented this always attractive subject, "Acute Endocarditis," leaves little to add except commendation. I am convinced that we frequently overlook the disease, especially the mural or non-valvular form of endocarditis. I do not believe it is possible to make a diagnosis at the first examination in a case of mural or non-valvular endocarditis, owing to the absence of distinct physical signs. It is equally difficult to decide at once when we have to deal with an acute endocardial inflammation in an individual suffering from an old valvular lesion,—a mitral insufficiency, for instance.

We should not lose sight of the fact that endocarditis is often accompanied by myocardial inflammation.

The most important factor in the treatment of the disease is absolute rest, which should be continued over a long period of time, in order to minimize the evil, especially to the valves. Drugs are of questionable value in endocardial and pericardial inflammations. Corrigan's advice to his assistant, who apologized profusely for having overlooked a pericarditis, is equally applicable in the management of endocarditis: "It is well; had you discovered the disease you would doubtless have treated it."

In closing, I desire to personally thank Dr. Herrick for the benefit I have received from listening to his valuable paper.

By Dr. C. H. Hunter—

All present feel that this is a red-letter day in the history of the Hennepin County Medical Society. The executive committee that has had this meeting in charge may felicitate itself upon the unqualified success of our first annual banquet. In thus felicitating ourselves we do not forget the patient labor of the varied but honorable past of the Society that has led up to and made possible the success of to-night's meeting. The policy of those who have sought the occasional vaccination into the veins of the Society of outside blood may consider itself justified. Let the virus take.

We feel indebted to Dr. Herrick for his scholarly presentation of present-day knowledge of this exceedingly dangerous but fortunately rather infrequent infection. There seems to be no symptomatology peculiar to each kind of infection, while bacteriological methods are uncertain and cumbersome. It is not always safe to infer the kind of infection on the endocardium, even when sure of that at the portal of entrance. Prognosis again is rendered uncertain from the same flora setting up at one time a mild local and general reaction, and at another a highly ulcerative and septic process. I have recently observed a gonorrheal infection, first of the pelvis, then of the joints and endocardium, terminating after four months of mild sepsis in an embolic pulmonary infarct. At Dr. Wesbrook's laboratory only the ordinary streptococcus was found on the mitral and in the infarct. The pelvic lesion was healed.

While most of these cases of infective endocarditis are secondary, as peritonitis is, for example, it certainly seems too much to claim they all are, as Litten does. At least the primary focus, or portal of entrance, is not observed. That the infection is endocardial can not be diagnosed until the local lesions are sufficient or of such nature as to occasion the physical signs upon which the diagnosis of endocarditis depends. Dr. Head will recall a case that at one time he left in my charge where the mental condition was such that with the absence of definite symptoms, we might have been content with the diagnosis of hysteria, had it not been for the persistent, low temperature. After ten days of increasing illness a mitral systolic murmur developed, when the diagnosis of ulcerative endocarditis was made. In the fourth week she died highly septic.

Dr. Bell and Dr. Jones will recall a case where, after several weeks of indefinite gastro-intestinal symptoms with slight temperature, endocardial signs developed where they had been previously absent. In a few days thereafter she died hemiplegic and septic.

As to the treatment, we must acknowledge that we have none that is actively beneficial.

By the prone position and strychnia and stimulation a patient may be tided over a time till a beningn infection runs itself out. Hydropathic measures, in my limited experience, commend themselves strongly. In the precordial compress, hot and cold, skillfully used, we have a means of calling out the reserve nerve-power of the body comparable to that of the Brand bath in typhoid fever.

Dr. Herrick, closing the discussion, said:

Dr. Hunter referred to the difficulty of recognizing the variety of micro-organism that is present in a given case. It is, of course, true that this is difficult; but, nevertheless, we should always aim to find out what organism is at fault. This can be done at times by a bacteriological examination of the blood. The prognosis and treatment may vary according to the germ present. Netter regards the pneumococcic endocarditis as relatively benign; and Harbitz has found certain differences, both anatomical and clinical, between the streptococcic and staphylococcic forms, strangely enough the latter being the more destructive and virulent. All efforts in this direction should be encouraged, and it is to be hoped that some day when, in a given case of acute endocarditis, a certain microbe is found, the suitable healing serum will be at hand.

STRICTURE OF THE RECTUM IN WOMEN DUE TO INFLAMMATORY PROCESSES IN THE PELVIS*

By J. L. Rothrock, M. D.

ST. PAUL

By far the more common pathological conditions which cause stricture, have their origin within the rectum or in its walls. Of lesser etiological moment are to be mentioned changes without the rectum, but lying in close proximity, among which are tumors filling the small pelvis and inflammatory processes. Pressure from the gravid uterus or benign tumors, while they may produce constipation, seldom interfere with the passage of the intestinal contents. On the other hand malignant tumors may infiltrate the perirectal tissue or even the wall of the rectum, and produce stricture. Large pelvic exudates may so fill the pelvis that by pressure on the rectum, free passage of the stools is obstructed, while later the contraction of perimetritic adhesions may also lead to constriction.

The great frequency of inflammatory conditions in the pelvis in women would lead us to infer that this might be a common cause of stricture of the rectum. This view, however, is not confirmed by a careful review of literature, for in fact but few cases of stricture due to this cause have been reported in detail. Three instances of stricture due to this cause have come under the observation of the writer. One was so persistent and complete as to require colotomy for its relief; the other two, while only partial, gave rise to serious inconvenience, one requiring a prolonged course of dilatation before the patient was relieved.

Case I.—Mrs. Z——, age 42, married; has one child. She was always well until May 26, 1896, when she was admitted to the City Hospital with an attack of pelvic inflammation involving chiefly the parametria. As the inflammation progressed, the exudate increased in size, and after four weeks, with no amelioration of symptoms, a vaginal section was made in the hope of finding pus, but only a dense, firm exudate was encountered, in which the uterus was fixed. The trouble progressed and ten weeks later, in August, an exploratory laparotomy was performed. Meantime the bowels were obstinately constipated, and were only moved with the greatest difficulty.

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*Read before the Minnesota Academy of Medicine, February 5, 1902.

On opening the abdomen the pelvis was found to be filled with an exudate of stone-like hardness, in which the uterus and adnexa were fixed. The wall of the upper portion of the rectum was markedly infiltrated and surrounded by the exudate. Owing to the conditions present, in order to afford some relief an inguinal colotomy was performed, following which for several weeks the bowels moved entirely through the artificial anus. At the time of the operation the constriction of the rectum was so tight as to scarcely admit the smallest rectal catheter. The patient remained in the hospital until February, 1897, and at that time the bowels had begun to move, partially, through the natural channel, and the exudate had partially subsided. Examination at present shows that the exudate has almost entirely disappeared, and the stricture has disappeared.

Representing lesser degrees of stricture are the following:

Case II.—Mrs. S——, age 31, has one child eight years old, and has had two miscarriages. Six months previous to consulting me, she had an attack of pelvic inflammation, which confined her to bed; and soon after she began to have a discharge of pus from the bowel. She has lost twelve pounds in weight. Rectal examination showed marked infiltration around the wall of the rectum at a point just within the reach of the finger, causing a constriction into which the tip of the finger could be introduced with difficulty. On vaginal examination the uterus was found to be retrodisplaced and adherent, and a well defined inflammatory mass could be felt posteriorly and to the left of the uterus. Vaginal section was performed, and the abscess drained through the vagina. The discharge of pus from the bowel ceased shortly after this, and after six weeks the discharge from the tube in the vagina practically ceased. The stricture was now dealt with by dilatation with bougies, and in a short time a No. 8 ruber bougie could be introduced, and from this time the patient made a speedy recovery. The stricture in this case was due to perirectal infiltration about the tortuous sinus, through which the abscess emptied into the bowel.

Case III.—Mrs. M——, age 38, married, and has two children. When first seen the pelvis was blocked by a firm mass in which the uterus was fixed, and was slightly movable with the mass. On palpation of the abdomen the mass could be felt extending to a point two inches below the umbilicus, rising quite well out of the pelvis. In April, 1897, an exploratory laparotomy was made. The uterus and adnexa were involved in the mass, and adherent to it were several coils of intestine. The patient was not seen again for some weeks after leaving the hospital, when she was found to be suffering from very obstinate constipation, the bowels not having moved for seven days.

Upon rectal examination, there was found high up, a constriction into which the tip of the finger could be introduced with difficulty and through which, after considerable effort, a flexible rectal catheter was finally passed, and a high enema was given through this, and a liquid bowel movement secured. The patient was instructed to keep the bowels open by active cathartics, in which she succeeded only once thereafter, requiring the assistance of a high enema. One year later the exudate had largely subsided.

ARTHRITIC SYMPTOMS

Undoubtedly in certain cases, even of septic inflammation of joints, it is not the presence of the specific microbe causing the constitutional symptoms which gives rise to the arthritis, but only the toxic products of the specific bacteria in the circulation. There is no doubt that there are at times comparatively mild toxic substances absorbed from the digestive tract during temporary gastro-intestinal irritation that may give rise to painful feelings in the joints. The tired feeling that so often accompanies digestive disturbance and that is usually localized more or less definitely in the neighborhood of large joints is probably an example of this. In damp and rainy weather this feeling of uncomfortable tiredness is easily exaggerated into a positive ache. This aching pain is often spoken of as rheumatic, though there is no more reason for thus speaking of it than of calling it catarrhal, or gouty, unless there is a wish to imply that all arthritic symptoms, no matter what their origin, can be justifiably spoken of as rheumatic.—Dr. J. J. Walsh, N. Y. City.

ONE YEAR'S CLINICAL OBSERVATIONS ON THE SURGERY OF THE GALL-BLADDER*

By A. J. Ochsner, M. D.

Surgeon-in-Chief to Augustana Hospital

CHICAGO

The paper is based upon observations made by the author upon forty-eight patients upon whom he operated during the year 1901 at the Augustana Hospital, of Chicago, for the relief of disease of the gall-bladder.

Especial stress was laid upon the causation of gall-stones. The accumulation of residual bile, the presence of infection of the gall-bladder and ducts, and the obstruction to the flow of bile through the ducts were considered most important factors. In other words, an interference with the drainage is sure to cause a certain amount of residual substance, which makes the accumulation of bacteria possible, and from this accumulation we must expect injury to the lining of the organ, which may be simply catarrhal at first, but which will later become destructive to the mucous membrane, giving rise to the formation of ulceration, and this in turn will result in cicatricial contraction, and this in further obstruction. In this manner the condition must progress from bad to worse.

In the meantime the mucus and the debris in the gall-bladder may have been moulded into gall-stones by the contraction of the gall-bladder, and this gives rise to another important element. The lining of the gall-bladder is now no longer in contact with only the relatively non-irritating bile, but it is in contact also with these hard bodies, which are often of very irregular form, frequently having sharp angles or projections.

It has been found that bacteria, especially the colon bacillus, are present with great regularity in diseased gall-bladders and in gall-stones. Cushing has found that thirty per cent of the gall-stone patients operated upon at the Johns Hopkins Hospital had previously suffered from typhoid fever, and I have found that more than 35 per cent of my cases suffered from acute or chronic appendicitis. In this year's cases a little over 50 per cent had suffered from appendicitis at some time. Of course it is difficult to determine whether in these cases the infection of the gall-bladder and the intestine in typhoid fever, and that of the gall-bladder and the appendix in appendicitis, is simply a simultaneous infection or whether the infection of the gall-bladder is secondary to the other infections.

A study of the table accompanying the paper shows a number of facts that are worth bearing in mind. Attention is directed to the following points. 1. To the sex of the patients, there being thirty-seven women and eleven men in this table. 2. To the age, only one of the patients being less than thirty years of age at the time of admission, although a large number of these patients refer the beginning of their symptoms back to the age between twenty and thirty years. 3. I have noticed that a large proportion, thirty-seven out of forty-eight, in fact nearly 80 per cent of these patients, complained especially of digestive disturbances, and that almost all of them had been treated by a number of physicians for gastritis. 4. One-half of these patients have never suffered from distinct biliary colic, and of those who had suffered from these paroxysms one-half had been looked upon as suffering from gastralgia. 5. Only a small proportion of these cases have been severely jaundiced at any time, there being twelve such cases, or 25 per cent; and in twenty-five cases, or more than one-half of the number, no jaundice had ever been observed, hence the two symptoms upon which so much stress has always been laid in the diagnosis of gall-stones have been absent in by far the greater number of these cases. The third classical sign, the passage of gall-stones in the feces, was absent in all but a few of these cases. I believe, consequently, that it will be necessary to change the basis of our diagnosis entirely, because the old plan must continue to result in wrong diagnosis.

The symptoms which will most constantly lead to a correct diagnosis when gall-stones are present, are not biliary colic, jaundice and the passing of gall-stones with the feces, as we have been taught for many years; but they are (1) digestive disturbances, a feeling of weight or burning in the vicinity of the stomach after eating, gaseous distention of the abdomen; (2) a dull pain extending to the right from the epigastric region around the right side about at a level with the tenth rib, extending to a point near the spine, and progressing upwards under the right shoulder blade; (3) a point of tenderness upon pressure between the ninth costal cartilage on the right side and the umbilicus; (4) a history of having had one or more attacks of appendicitis or typhoid fever; (5) in many of these cases a slight tinge of yellow in the skin, not sufficient to be recognized as icterus, but still sufficient to be perceptible upon close inspection, especially on the days on which the patient is not feeling very well, when she complains of feeling bilious; (6) usually an increase in the area of liver-dullness; (7) a swelling of variable size opposite the end of the ninth rib.

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*Abstract of a peper read before the Hennepin County Medical Society, Minneapolis, March 3, 1902

Of course if we have added to these symptoms the biliary colic, followed by distinct jaundice and possibly by the passage of biliary calculi, our diagnosis is still further confirmed; but even without these last three conditions we must make the diagnosis ordinarily, or we shall miss a diagnosis in most patients suffering from gall-stones.

So long as the gall-stones simply remain in the gall-bladder without causing any complications, the harm to the patient is relatively slight; his comfort will be greatly interfered with on account of the disturbances in his digestion; but the pain will not be extreme, and he usually accumulates an abundance of fat, especially in the abdominal walls. Consequently it has been held by many authorities that it is not wise to make use of radical measures for the removal of gall-stones so long as they do not give rise to any grave disturbances. This would undoubtedly be a proper and reasonable view to take, were the danger to the patient approximately the same before and after the occurrence of these complications. This, however, is not the case, as is shown in this series in which all of the cases which were operated upon before any serious complications occurred, recovered, while the deaths occurred in cases which undoubtedly could have been saved had they been operated upon earlier before this occurrence.

The complications which are likely to be caused by the presence of gall-stones may be chronic in character, taking the form of digestive disturbances and giving rise to almost constant discomfort. This condition is probably due to the interference with the passage of food through the pylorus into the doudenum causing dilatation of the stomach.

Again, the patient may be constantly in a slightly septic condition, because there is absorption of septic material from the infected residual bile, as well as from the products of fermentation in the dilated stomach. These conditions frequently result in chronic invalidism, making it impossible for the patient to follow the ordinary occupations or to enjoy life in any way. The constant irritation of the gall-bladder, due to the pressure of gall-stones, undoubtedly has much to do with the development of carcinoma in this organ. In cases of primary carcinoma of the gall-bladder I have always been able to get a history of gall-stones dating back many years, and I have invariably found these present in the gall-bladder in these cases at the time of the operation or autopsy. Aside from these chronic conditions, gall-stones may at any time cause exceedingly grave acute conditions. These complications are all the result of inflammation, and their result must consequently depend upon the extent to which this develops.

In any case complicated with an acute inflammatory condition, the author believes the same general principles should be employed in the treatment of this condition as in inflammatory conditions involving the peritoneum from any other cause. So long as there is no circumscribed accumulation of pus, the treatment should consist in rest. This can be secured most readily by using gastric lavage, in order to remove remnants of food or decomposing mucus from the stomach, then prohibiting the use of food and cathartics by mouth.

The use of moist heat in the form of poultices or fomentations, or of cold by means of an ice-bag, gives the patient great comfort and is undoubtedly beneficial. Morphia may be given hypodermically if necessary, but so long as neither food nor cathartics are given by mouth, the pain usually subsides rapidly and permanently. Nourishment may be given by enema not oftener than once in four hours, nor in larger quantities than four ounces at a time. I prefer for this purpose one ounce of any one of the various reliable predigested foods, mixed with three ounces of warm normal salt solution. Unless the acute condition is complicated with a mechanical obstruction of the intestines, the patient's chances for recovery from the acute attack are always better without than with an immediate operation.

It is necessary to make a definite distinction between intestinal obstruction due to peritonitis, and the same condition due to a mechanical condition, such as the impaction of a gall-stone. The former condition is so much more common than the latter that it is only very seldom that the latter needs to be considered.

When the patient has recovered from the acute attack his further treatment may be conducted medically, which will not cure him, but may improve his condition very greatly, or surgically, which is likely to result in a perfect and permanent recovery.

The medical treatment must consist chiefly in the use of large quantities of water, preferably taken hot, and in the use of a diet fairly free from sugar and starch. I believe, however, that the greatest benefit comes from drinking a great amount of good water, and never eating quite enough to satisfy the hunger, and from taking vigorous out-of-door exercise, such as horseback riding, walking, or rowing. Sodium phosphate in doses of one drachm, taken in a large goblet of hot water half an hour before each meal, and pure olive oil, taken in doses of one-half to four ounces at bed time in the foam of beer, ale, or malt extract, or in orange-wine, seem to have given relief to patients suffering from gall-stones, many of them remaining free from severe attacks for long periods of time by taking these remedies and diet and proper exercise.

Whether this relief is due to the fact that in this manner the alimentary canal is kept in a relatively aseptic condition, constipation prevented, and elimination facilitated by the use of large draughts of hot water, or whether there is a special virtue in the remedies, it is difficult to say. That many patients are relieved of their gall-stone colics upon following this plan of treatment there can be no doubt. It is plain, however, that this form of treatment can be of benefit only to a limited number of patients; i. e., to cases in which there is no impaction of gall-stones in the gall-bladder or in the common or cystic duct, and which are not complicated with serious lesions of any portion of the mucous membrane lining these parts, or with extensive adhesions. For all cases then which cannot be relieved in this manner with any degree of permanency and for those who are unwilling to undergo continuous medical and hygienic treatment for the sake of securing relief from paroxysms without being relieved of their gall-stones, nothing remains but the removal of the gall-stones by an operation.

The author closes his paper with tne following conclusions:

1. The diagnosis of disease of the gall-bladder and of gall-stones requires further study and observation.

2. The classical symptoms must be supplemented, in order to be sufficient as a basis for diagnosis.

3. It is not wise to operate during the acute attack of cholecystitis.

4. Patients much reduced by long-continued suffering do not well bear prolonged operations upon the gall-bladder and ducts.

5. Robson's observation that patients with carcinoma of intra-abdominal organs do not bear gall-bladder operations well, has been borne out by my experience.

6. If the operation can not be postponed in presence of extreme jaundice, it should be confined to simple drainage of the gall-bladder.

DISCUSSION

By Dr. William J. Mayo—

I am particulary impressed with three things to-night. First, that Minneapolis can justly lay claim to be a medical center; second, that the general surgeon has much to learn from the physician as shown by the paper of Dr. Herrick; and, third, that the general physician has much to learn about gall-stone disease as demonstrated by Dr. Ochsner's paper.

The gall-stone subject is a much larger one than has been thought, and the lack of appreciation by the physician of the dangers of delay in seeking surgical aid in a large class of cases is responsible for much of the suffering and a considerable mortality.

We have of late been examining the records at

St. Mary's Hospital at Rochester with regard to the results obtained in 328 cases of gall-stone disease operated upon. Speaking in a general way, the mortality in over 200 uncomplicated cases was less than one per cent, but in 40 per cent complications existed,—obstruction at the cystic duct with retention or empyema of the gall-bladder, infection of the gall-ducts and gall-bladder, stones in the common duct and malignant disease; each of these conditions adding largely to the mortality, and most of them could have been avoided by a timely operation. In the vast majority of cases the diagnosis was, or could have been, made before these complications developed, and the patients saved the danger to which they had been unnecessarily exposed. It is not fair to the patient to continue the medical treatment of gall-stone disease after active symptoms manifest themselves, and the difference between this condition and the slumbering gall-stone must be insisted upon. The same amount of symptoms which would call for an operation for chronic appendicitis should also lead to the surgical treatment of gall-stone disease. The question of diagnosis is important, and in a large number of cases a surgical, if not a pathological, diagnosis can be made; that is to say, a condition can be shown to exist which demands operative relief, whether there exist gall-stones or not.

By Dr. J. E. Moore—

I have been pleasantly entertained and greatly instructed by Dr. Ochsner's valuable paper. The paper is especially well adapted to us, because we are not up to the standard in the matter of diagnosis and treatment of gall-stones. The condition is too frequently overlooked, and when diagnosticated is too often treated medically, while those who are entitled to express an opinion all agree that the only curative treatment is an operation.

The profession in Minneapolis need not take a back seat for any city in the diagnosis and prompt surgical treatment of appendicitis, extra-uterine pregnancy, or any other disease concerning which our knowledge has increased so rapidly within the past few years; but I feel that we do not recognize and operate upon gall-stones as often as we should. It is but a very few years since we began to recognize appendicitis in any but the most marked cases, and then we operated only when a large abscess was present, but now we all recognize the disease in all its phases, and frequently operate upon patients for chronic appendicitis who have never suffered from an acute attack, and thereby save a vast amount of suffering and add many years to human life.

Dr. Ochsner's paper, based upon his large experience, reminds us again that we can save life-long suffering, and can prolong human life by early diagnosis and prompt surgical treatment of gall-stones, and that the operation is accompanied by the same low mortality-rate that we have in appendicitis operations in the interim. There is every reason why we should operate in these cases and no reason why we should not, because, as Dr. Mayo says, when symptoms indicate an operation in the gall-bladder region, if gall-stones are not found some other surgical condition is always found which can be relieved.

It has been suggested that gall-stone seed has been sown in the southern part of the state because the crop of gall-stones seems so large. Gentlemen, they have sown the seed of accurate diagnosis, and are justly reaping a rich harvest.

I feel that we are under lasting obligation to Dr. Ochsner for his helpful paper.

By Dr. J. W. MacDonald—

Dr. MacDonald said that one cause of gall-stones had not been mentioned by the essayist or by the gentlemen who participated in the discussion. He referred to movable kidney, which by its excursions had mechanically irritated the gall-bladder, and thus had given rise to conditions which eventually developed into gall-stones.

By Dr. F. A. Dunsmoor—

I should be sorry to miss the opportunity of congratulating both the writer upon his timely paper and its deductions, and our local Society on this felicitous occasion, which brings such distinguished members of our profession to our banquet, who, in turn, feast our mind and reason.

I am sure we all reap benefit from the experience of a surgeon who counts his operations, not by tens or hundreds, but by thousands; and, indeed, concerning the essayist, we may borrow a comment from Holy Writ, and say that "He speaks as one having authority."

I agree with Dr. Ochsner as to the probable location or formation of gall-stones in general, and that anything which impedes the egress of bile from the gall-bladder assists, mechanically and materially, in producing these concretions. I am also certain that true biliary calculi are sometimes formed in the minute ducts of the liver, and at remote distances from even the hepatic duct. I distinctly remember autopsies showing this fact, and I recall one case where stones half an inch in diameter were found in the parenchyma of the gland, with no evidence of a possible inflammatory condition or scar to indicate a migration from its previous location.

Dr. Ochsner has apparently placed typhoid fever in a causal relation to the formation of gall-stones. Here we disagree, unless we might say the same of appendicitis, or of fibroma in the uterus, and numerous other affections, since the same percentages show that a previous typhoid fever had existed, the majority of people of forty years of age having had typhoid fever, and only sixteen per cent have had gall-stones. There is a difference in sex, there is a predisposing cause in age, and I am sure that geographical location has great influence in the formation of biliary as well as other calculi.

We find certain areas of our own land in which calculi are very prevalent. Witness the large number of patients with stone in the bladder in Kentucky, Tennessee, Virginia, and parts of New England, while the percentages run extremely low upon our prairie lands.

I totally disagree with the opinion given by Dr. Mayo, "That the mortality following surgical operations for the relief of gall-stones and for appendicitis are the same." If there is any one abdominal operation which can be made with safety by the beginner, it is for the relief of inflammation of the vermiform appendix, especially if the operator selects the proper time for his operation. And, in my opinion, there is no operation made within the abdomen which requires more skill than the safe removal of an impacted stone in the common duct. It is true that a stone in the gall-bladder, without complications, may be removed with a reasonable degree of safety; but in the hands of the average surgeon, the mortality must ever remain higher than for appendectomy. There is a relationship between unfavorable times for operation for gall-stones, during an acute attack with jaundice, and for appendicits on the third or fourth day, with an exudate.

Dr. Ochsner closed the discussion, saying:

I wish especially to emphasize the importance of making a diagnosis in these cases.

Several years ago I visited the medical Mecca of Southern Minnesota, and found Dr. Mayo busily engaged in removing gall-stones from many patients. I asked for an explanation of the fact that he had so many more of these cases than I and other surgeons. His answer explained it all. He said: "We diagnose gall-stones in these cases." Upon returning home I verified the suggestion which this answer contained by finding that in most of these cases I had diagnosed some other condition, which existed coincidently or secondarily, but which was of very little importance. I operated upon a large number of these cases, who had haunted me because I had treated them before for some condition which was not responsible for their distress, and consequently gave them only temporary relief at best. The result has been satisfactory, and they no longer complain of gastritis and other secondary conditions.

Many of these patients I had treated for the relief of floating kidney, but I am confident that their suffering was due to the presence of gall-stones, and that the other condition was a coincidence, although in drawing down the gall-bladder it might occasionally favor the formation of gall-stones by interfering with the drainage of the gall-bladder, and thus favoring the accumulation of residual bile.

There can be no doubt but what traumatism at times results in a dependent gall-bladder, and that this results in the formation of gall-stones.

TREATMENT OF EPILEPSY

So far we have learned two things: (1) that nearly 85 out of every 100 epileptics acquire the disease before they reach the age of 20 years; (2) that the four factors in heredity,—epilepsy alcoholism, insanity and tuberculosis, in addition to the cerebral palsy cases of early life,—constitute 67 per cent of all the cases we have to deal with.

These facts furnish a good working basis for treatment thus far. They teach us that the time to treat epilepsy is when the epileptic is young and the disease but recently developed. Not many cases of epilepsy can be cured, but no one can say off-hand what case is curable and what is not.—Buffalo Medical Journal.

NORTHWESTERN LANCET

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MARCH 15, 1902

JOHN B. MURPHY

Dr. Murphy, of Chicago, has received the Laetare medal from the University of Notre Dame, Indiana, and is the third physician to receive this medal. It is bestowed upon him for his signal success in medicine and surgery.

Dr. Murphy was born in Wisconsin in 1857, was graduated from Rush and studied abroad. Since his return to Chicago, in 1884, he has enjoyed a remarkable practice and reputation.

DEATH OF DR. CHRISTIAN FENGER

The famous surgeon of Chicago, Dr. Christian Fenger, died of pneumonia on March 7th, after an illness of one week.

Dr. Fenger was born in Copenhagen, Denmark, Nov. 3, 1840, and was therefore 62 years old at the time of his death,—too young for so brilliant a man to die.

He was a surgeon of international reputation, a skilled operator, a profound diagnostician, and a convincing teacher. While still a student of medicine he served as surgeon in the war between Denmark and Germany. After his graduation he assisted May in the ear clinic in Copenhagen. He afterwards became a surgeon in the Red Cross Ambulance Corps of the Franco-Prussian war, then prosector and privat-docent at the Copenhagen City Hospital.

He came to Chicago in 1877, and was immediately recognized as a power in pathology and surgery.

He occupied the chair of clinical surgery in the Chicago Medical College of Physicians and Surgeons, and latterly, from 1899, was clinical professor in Rush Medical College.

He was a member of all the important national societies, and a few international ones. At the time of his death he was president of the Chicago Medical Society. A few months ago he was given an ovation at a testimonial dinner by 500 physicians of Chicago, who emphasized their appreciation of his popularity and worth.

In manner he was brusque and abrupt, but had a kind interior, was painstaking in his efforts, conscientious in his work, and modest and unassuming, but able to maintain his position in debate or at the bedside.

He will be missed and mourned by patients and physicians.

THE AUTOMOBILE SHOW

Orders for $750,000 worth of machines is the record of the "Auto" show which lasted eight days in Chicago. There were 120 machines exhibited,—bicycles, tricycles, four wheelers, and racers,—besides various appliances and mechanical devices to propel or accompany the outfits.

Electricity, steam, gasoline and kerosene were used for power in engines varying from 3 H. P. to 25 H. P., selling at prices ranging from $600 to $8,000. There were light runabouts and heavy cumbersome racers, the latter capable of making seventy-five miles an hour.

The gasoline machines take precedence, steam and electricity being next in popularity.

The array of machines was amazing as to numbers, dazzling in brilliancy, and confusing as to detail or preference; and when one left the building after seeing the display, hearing the relative merits of each machine set forth, and had heard the roar of the racer, it was not difficult to imagine that one had wheels in his head.

The sale of machines demonstrated the interest people are taking in the matter; and a large number of orders were taken from professional men. Machines are already in use in out-of-the-way country places where they were least expected. The average physician buys a good machine, and is seemingly able to pay for and maintain it, the latter being a not inconsiderable item.

In the larger cities the number of machines owned by physicians is rapidly increasing. Several prominent men in Chicago depend entirely upon them for transportation, and they express themselves as well pleased. Machines are made now with 7 or 8 H. P. engines; and they are pleasing in outline, practically noiseless, simple in manipulation, and will run every day in the year, and through almost impassable roads. The "good roads" movement that is spreading so rapidly over the country will stimulate the sale and usefulness of these convenient non-shying carriers.

SOCIETY MEETING

The annual meeting of the Hennepin County Medical Society, Monday evening, March 3, was a gratifying success. One hundred and fifty physicians were present. The dinner was on time; the speeches were short; the cigars were long; and the scientific program was full of interest. Physicians and surgeons from the country were scattered through the audience to hear the distinguished men from Chicago.

Drs. Ochsner and Herrick were the attraction. Dr. W. J. Mayo, of Rochester; Dr. W. L. Beebee, of St. Cloud; and Drs. Thos. McDavitt and H. P. Ritchie, of St. Paul, were among the interested listeners.

The attention of the readers of the Lancet is called to these papers, which appear in this issue.

Dr. Herrick discusses in a very scholarly manner "Acute Endocarditis," and lays particular stress on a few important diagnostic symptoms. The paper presents many points clearly and positively, without verbosity or dogmatism, and it will create a new interest in this subject. It is very evident that this disease is frequently overlooked or unrecognized, and the essayist will have accomplished a great service if he succeeds in stimulating his hearers and readers to renewed care and accuracy in diagnosis.

Dr. Herrick is recognized as an authority on physical diagnosis, and therefore his utterances are particularly valuable.

Dr. Ochsner, of Chicago, presented a practical and scientific paper on gall-bladder surgery He had operated on forty-eight cases during the year 1901, and he had tabulated his cases in seperate papers in order that they might be studied conveniently.

Dr. Ochsner pointed out in a very emphatic manner the number of cases of gall-stone disease that were not diagnosed by the general practitioner. He maintained that a large number of patients were treated for chronic gastritis, chronic appendicitis, constipation and chronic diarrhea, and catarrh of the liver ducts that should be recognized as suffering from gall-stone. He went so far as to intimate that these diseases should no longer be mistaken, and that the surgeon should assist the internalist in the majority of patients who were persistent invalids. Jaundice and pain were frequently absent, and yet gall-stones were present, and accounted for a chain of symptoms that were often treated speculatively, and not from the standpoint of exclusion. There is no doubt but that gall-stones are more frequently found that in former years, and this fact is due to the great improvement made of late in diagnosis and to the energetic surgeon who will demand the opportunity to explore the abdominal cavity for one or the other of a few conditions which cannot be positively appreciated without ocular inspection.

The operation for investigation of the gall-bladder may overshadow for a while the time-honored appendicitis. It is to be hoped that such surgical measures may be in the hands of skilled men, so that the gall-bladder may not be opened on an insufficient suspicion. If the desire to operate should seize every man who wishes to be known as a surgeon, it is probable that many a neurasthenic will grace or disgrace the operator. Perhaps many of these neurotics are surgical cases, yet it would be well to be sure of one's ground before resorting to radical surgical measures that may bring about profound infections or serious shock.

The Hennepin County Society has a membership of one hundred and eighty, and ranks second in numbers to the State organization. Its programs have been uniformly good, the discussions animated, and the attendance large. The utmost harmony prevails, and the cliques of past days have faded away. The younger progressive men, men who are studious and scientific in their inclinations, form the backbone of the association, and political aspirations are now in the background, and every one is striving for medical advancement.

MISCELLANY

URIC ACID FALLACIES

Dr. Frank Billings, of Chicago, thus sums up from medical literature the theories concerning uric acid, gout and the morbid conditions which occur co-incidentally with gouty states:

(1) Uric acid probably does not exist in the blood in health.

(2) Uric acid is probably formed in the kidney from two sources: (a) From urea interacting with some antecedent of urea, probably glycocine in the kidney. The large amount of uric acid excreted by birds and reptiles and the presence in the blood of these animals of urea and not uric acid points rationally to this source of uric acid in these animals and it is rational to infer that a part at least of the uric acid excreted by mammals, including man, is formed in the kidney in this way. (b) From the neucleins of the body by oxidation probably in the kidney.

(3) That uric acid is not poisonous. That the presence of uric acid in the blood as the quadriurate or biurate probably means that it has been absorbed from the kidneys.

(4) That defective kidneys are the cause of the accumulation of urates in the blood because of insufficient excretion.

(5) That antecedent kidney disease is commonly formed in so-called lithemic states which have often been attributed to the irritating effects of uric acid upon the kidney capillaries and the cells of the tubules.

(6) That the lesions formerly attributed to uric acid are probably due to the toxic effect of the alloxuric bases.

(7) That the presence of these lesions in the kidneys and in the connective-tissue elements of the body leads not only to accumulation of the urates in the blood, but also furnishes a proper condition of tissue for the deposition of the urates as concretions in joints and fibrous tissues.

(8) That the degree of alkalinity of the blood has no influence upon the presence of the urates in the blood.

(9) That the deposited biurate concretions cannot be redissolved out of the tissues by an attempt to increase the alkalinity of the blood and fluid by the use of alkaline medication.

(10) That the presence of concretions of the urates in the body comprises the sum total of its pathologic effects.

(11) That the so-called uric acid diathesis, the influence of heredity, the bad habits of life, alcoholic indulgence, lead poisoning, etc., consists in a condition or tendency to disintegrate a quantity of neuclein far in excess of the amount usually split up, with resulting increase of uric acid and alloxuric base formation.

(12) That the condition of the urine as to the presence of uric acid is in single specimens not indicative of the blood state in relation to the presence of urates.

(13) The chemical reaction of the urine bears no relation to the presence of uric acid in the urine and blood, nor does it indicate the chemical reaction of the blood.

SOME OF THE FALLACIES OF URIC ACID ARE THEREFORE:

(1) That uric acid is toxic.

(2) That it is a causative factor in any disease except gout.

(3) That "uricacidemia," meaning acid blood, does not exist.

(4) That the chemical reaction of the blood may be altered by the use of medicinal quantities of the alkalies or by diet.

(5) That uratic deposits may be dissolved out by the administration of alkalies.

(6) That lithia is a uric acid solvent of unusual potency.

(7) That uric acid is an abnormal constituent of the urine.

(8) That an excess of uric acid in the urine at one time, or a deficiency at another time, indicates an abnormal condition in reference to uric acid.

(9) That rheumatism is due to uric acid.

DIPHTHERIA ANTITOXIN IMMUNITY

As diphtheria antitoxin is practically harmless, all exposed persons should receive an immunizing dose in proportion to age. Two hundred and fifty units should be given to children under two years, and 500 to all others. The immunity will last for at least three weeks, provided a reliable antitoxin is used.

All exposed persons should be removed from infected surroundings, either by thorough disinfection of their own quarters or by removal to other places. If this be impossible, the immunizing doses should be repeated every third week. H. D. Jump (Phila. Med. Jour., Jan. 11, 1902).

REPORTS OF SOCIETIES

HENNEPIN COUNTY MEDICAL SOCIETY

A. E. Benjamin, M. D., Secretary

Preceding the regular meeting of the Hennepin County Medical Society, March 3, 1902, a banquet was held at the Commercial Club, which was participated in by about 130 physicians and surgeons, a few not being members. The society entertained as guests Drs. A. J. Ochsner and James B. Herrick, of Chicago.

The regular meeting was held in the rooms of the Commercial Club, instead of the Society's rooms. Preliminary to the regular program, remarks were made by Dr. Staples, president of the Society, Dr. W. A. Hall, and Dr. W. A. Jones. Dr. Herrick read a paper on "Acute Endocarditis." Discussion of the paper was led by Dr. Bell, and Dr. Hunter followed. Dr. Herrick closed the discussion.

Dr. Ochsner read a paper entitled, "One Year's Observation in Gall-Stone Surgery." The discussion was opened by Dr. W. J. Mayo, of Rochester, followed by Dr. J. E. Moore, Dr. J. W. McDonald, Dr. Dunsmoor, Dr. Hoegh, and Dr. Beebe, of St. Cloud. Dr. Ochsner closed the discussion.

After a vote of thanks to the visiting men who read papers, the Society adjourned.

The papers and discussion appear in this issue of the Lancet.

BOOK NOTICES

Essentials of Physiology. Prepared especially for Students of Medicine; and arranged with questions following each chapter. By Sidney P. Budgett, M. D., Professor of Physiology, Medical Department of Washington University, St. Louis. 16mo volume of 233 pages, finely illustrated with many full-page half-tones. Cloth, $1.60. Philadelphia and London: W. B. Saunders & Company.

This work is especially new. It consists of abbreviated lecture notes, and is intended for the use of students in conjunction with a text-book; hence it is not a substitute for a larger work. The subject of physiology is covered in ten chapters. Each chapter is followed by a series of well-selected questions, summarizing what has previously been read, and at the same time serving to fix the essential facts in the mind.

The little book is well gotten up, like all of Saunders' Question-Compends. The illustrations are nearly all full-page half-tones.

Neurological Technique. By Irving Hardesty, Ph. D., Instructor in Anatomy in the University of California, formerly Fellow and Assistant in Neurology in the University of Chicago; illustrated; cloth, $1.75. Chicago: The Press of the University of Chicago.

This volume of 185 pages by a former assistant in neurology at the Chicago University is an introduction and laboratory guide to the study of the architecture of the nervous system, and will be valuable to anatomists, physiologists, zoölogists, and others who are interested in biological problems.

Special attention has been paid to indicating the quantities of reagents used, and the time required for each. The time is shown in heavy type, and can be read at a glance. General instructions are given, and an outline for the examination of the nervous system and its topographical features is fully explained. All of the latest methods for preparation and staining are fully explained.

The nomenclature is that accepted by the German Anatomical Society, and is already widely used on the Continent and in England, as well as in the United States.

The book bears the endorsement of Henry Donaldson, which is sufficient guarantee for its widespread acceptance. It is well and neatly printed, bound, and indexed by the Press of the University of Chicago.

General Surgery. Vol. II. Practical Medicine Series, Nov. 1901. 403 pages; Cloth, $2.00. Edited by John B. Murphy, M. D., Professor of Surgery Northwestern University Medical School, Chicago.

Dr. Murphy did not try to incorporate in one small volume all that has been written on surgery in the last year, but has extracted from articles published that which he deemed most worthy of recognition. Due credit is given each writer, and the text of the paper is not changed. Any added information gleaned from experience by the editor and any criticism pertinent or otherwise are enclosed in brackets, and signed by him.

The chapter on anesthesia is of special value, and takes the stand that the editor has always taken, i. e., general anesthesia is administered in a great many cases where a local anesthetic should have been used.

The vermiform appendix comes in for its share of consideration, and also the *x*-ray, while military surgery is not treated with the enthusiasm it is wont to elicit.

C. D. HARRINGTON.

A TEXT-BOOK OF SURGERY. By Dr. Hermann Tillmanns, Professor in the University of Leipsic. Translated from the Seventh German Edition by Benjamin J. Tilton, M. D., Instructor in Surgery in Cornell University, and John Rogers, M. D., Professor of Surgery, Cornell University. Vol. I, The Principles of Surgery and Surgical Pathology, with 516 illustrations. New York: D. Appleton and Co.

This is a work which is worthy of the perusal of all surgeons and general practitioners. It contains many of the fundamental laws that influence the normal tissues. It describes minutely the reaction of these normal tissues in the diseased state to infectious germs. The pathology and bacteriology is quite complete and up-to-date. It takes up every phase of pathology and bacteriology relative to surgical treatment. The details, which are necessary for the successful surgeon, are well observed.

The illustrations of the book are very numerous, and give one at a glance, in many instances, a knowledge of various modes of treatment and dressings. The chapter on anesthesia is a very good one.

The third section of the book, on surgical pathology and therapy, is most interesting and profitable reading. The description of the various micro-organisms and their action upon the tissues is quite full. The phenomena of healing of the wound are described in a very practical way. Various inflammatory and infectious diseases are classified and described in a convenient and helpful manner. The author's treatment of tuberculosis, septicemia, pyemia, erysipelas, etc., is especially interesting.

The chapter on fractures and other surgical diseases of the bone, is quite extensive. Diseases and injuries of the joints are also well described and illustrated. The chapter on tumors, while it is well written, might have been much more extensive.

The book, in general, is one which describes surgical diseases and injuries of the human body especially from the standpoint of the pathologist and bacteriologist, and is one which we can highly recommend to any one especially interested in that line. Treatment is very little touched upon, in comparison with the amount of descriptive matter.

A. E. BENJAMIN.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium; of the Medical Society of London; Corresponding Fellow of the Sociedad Espanola de Hygiene of Madrid; Member of the Association of American Physicians, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Volume II, June, 1901. Volume III, September, 1901. Volume IV, December, 1901. Philadelphia and New York: Lea Brothers & Co.

The second volume for the year is devoted to the surgery of the abdomen, including hernia, to gynecology, to diseases of the blood and ductless glands, and to ophthalmology. In the surgical part the operative treatment of diseased conditions of the stomach and liver is prominent. Brewer's Diagnosis Chart in Diseases of the Gall-Bladder and Ducts is published in full and will be found very convenient for reference. Among interesting single cases is one of ligation of the abdominal aorta performed by Keen, of Philadelphia. The patient lived three weeks and then died of malarial fever. This is the thirteenth case of ligation of the abdominal aorta on record.

The chapter on gynecology contains an interesting article on the ovary, while that on the blood is largely devoted to the consideration of various forms of anemia. In the section devoted to ophthalmology the external eye occupies a prominent place. Among exceptional toxic amblyopias are mentioned two cases due to excessive tea-drinking.

The September volume treats of diseases of the thorax, of dermatology and syphilis, of diseases of the nervous system and of obstetrics. Ewart's article on the thorax deals largely with treatment and contains many useful hints for the management of colds, whooping-cough, angina pectoris and other diseases. The chapter on dermatology contains several useful hints about syphilis. The part devoted to the nervous system is principally taken up by the brain and spinal cord. In obstetrics are many interesting hints upon the diagnosis and incidental disorders of pregnancy, puerperal eclampsia is discussed at length and under the head of surgery of obstetrics is a resume of cases of medullary narcosis or spinal cocainization, with conclusions unfavorable to its employment.

Progressive Medicine for December begins with an article on diseases of the digestive tract and allied organs by Max Einhorn. Upon the ever interesting subject of appendicitis the authorities quoted are largely in favor of early operation. In genito-urinary diseases Belfield gives prominence to the operation of prostatectomy. Under surgery, anesthetics occupy the chief place. In treating of diseases of the kidney there is an excellent article on the relation of cardiac hypertrophy and renal disease. The chapter on physiology has much to do with the nervous system. Hygiene is a short story in this volume, but the article on therapeutics contains many valuable hints.

Wm. Davis.

A Treatise on the Acute Infectious Exanthemata. Including Variola, Rubeola, Scarlatina, Rubella, Varicella, and Vaccinia, with especial reference to Diagnosis and Treatment. By William Thomas Corlett, M. D., L. R. C. P. Lond, Professor of Dermatology and Syphilology in Western Reserve University; Physician for Diseases of the Skin to Lakeside Hospital; Consulting Dermatologist to Charity Hospital, St. Alexis Hospital, and the City Hospital, Cleveland; Member of the American Dermatological Association and the Dermatological Society of Great Britain and Ireland. Illustrated by 12 Colored Plates, 28 Half-tone Plates from Life, and 2 Engravings. Pages viii-392. Size, 6¼ by 9¼ inches. Sold only by Subscription. Price, Extra Cloth, $4.00 net, Delivered. Philadelphia: F. A. Davis Company.

This treatise upon the acute exanthemata will be received with favor by every young practitioner of medicine. The subject-matter has been worked out along original lines, and expresses the ideas of a man well qualified to write upon these subjects. Moreover, there is a lack of that "endless repetition" of previous writings upon the subject which is so marked a feature of some recent medical publications.

The most valuable part of the work from the practical standpoint is the plates. Of these there are many. They are excellent reproductions from photographic negatives taken by the author himself. The chapter on smallpox particularly is rich in these plates.

In order to reproduce the delicate shades of color seen in the various exanthemata the author has availed himself of the services of Felix Meheaux, dessinateur et photographé of the Hospital Saint Louis, Paris. The reproductions by this artist of the skin colorings seen in the various exanthemata are unusually true to life, and they add much to the value of the work.

The book opens with an interesting chapter upon the early history of the acute exanthemata. This is followed by a long chapter upon variola, with 23 full-page plates illustrating smallpox in all its stages. The subject-matter of this chapter dealing with the differential diagnosis of smallpox and the value of vaccination in the prevention of the disease, is especially to be commended.

The value of the red rays of light in the treatment of smallpox is considered at some length, and the evidence in its favor adduced. After variola come chapters on vaccinia and varicella, well illustrated by colored and uncolored plates.

Scarlet fever is dealt with in Chapter V; rubeola in Chapter VI, and rubella in Chapter VII. Many colored and uncolored plates in each chapter illustrate the skin appearances of these diseases. These plates reflect great credit upon the artist.

A full page size plate representing Koplik's spots in measles is a feature of the rubeola chapter, but one looks in vain for definite statements from the author concerning the diagnostic value of these spots.

At the close of the work the author gives, in tabulated form, the differential diagnostic features of the various acute exanthemata.

The book has been published in excellent form, and is a creditable addition to the medical literature of the subject.

Geo. Douglas Head.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. R. P. Moore, of Davenport, Washington, has gone to New York for special study.

Dr. D. N. Reber, of Hamilton, Montana, is doing post-graduate work in New York.

Dr. and Mrs. A. A. Law, of Minneapolis, have gone to Japan for an extended visit.

Dr. H. H. Kimball, of Minneapolis, has returned from California.

Dr. W. J. Swartz, of Minneapolis, has moved to Forest Lake, Minn.

Dr. Sorkness, of Fargo, has recovered from a slight attack of typhoid.

Dr. Boardman, of Oakes, N. D., will enlarge his hospital this spring.

Dr. J. D. Taylor, of Stevens, N. D., has about decided to locate in Kenmare, N. D.

Dr. G. S. Waltham, of Warren, Minn., has gone east to look over sanitariums for consumptives.

Dr. F. C. Harris, of Cando, N. D., returned from Chicago where he went to do some special work.

Dr. M. E. Withrow, of Stillwater, has gone to Spokane, Wash., where he will take up his residence.

Dr. A. E. Anderson, of Devil's Lake, N. D., has been appointed assistant surgeon in the regular army.

Dr. E. F. Reamer, who has been practicing several years in Minneapolis, has moved to Mitchell, S. D.

Dr. C. V. Templeton, of Woonsocket, S. D., was married last month to Miss Mary Minty, of Elk Point, S. D.

Dr. W. E. Crane has resigned as health officer of Mitchell, S. D., and Dr. B. A. Bobb has been appointed to fill the vacancy.

Dr. J. W. Campbell, of Tower, N. D., is down with the smallpox. The Lancet rarely records a case of smallpox among physicians.

Dr. J. W. Wells, formerly of St. Paul, who has been practicing a short time at Lakota, N. D., will locate in McHenry, the same state.

Dr. F. A. Moore, of Lesterville, S. D., has decided to seek a new location, and the local papers say a new physician is wanted in that place.

Dr. Geo. McLain, formerly of North Dakota, has located in Minneapolis for the practice of eye, ear, nose and throat diseases. He has offices in the Syndicate Block.

Dr. K. A. Wadel, of Portland, N. D., is in Chicago doing post-graduate work. Dr. Oftedahl, of Hatton, has charge of Dr. Wadel's practice in the latter's absence.

Dr. George N. Butchart, of Hibbing, Minn., has gone to Palmer, Minn., where he will reside. Dr. A. B. Kirk succeeds Dr. Butchart as first assistant in the Rood Hospital.

Dr. Joseph Mark, of Stephen, Minn., has retired from practice, and is succeeded by Dr. S. B. Walker. Dr. Mark will locate in St. Paul, and go into the drug business.

Dr. T. Thams, of Fargo, N. D., has been nominated for mayor by the socialists, but Dr. Tham's patients need have no fear, as socialism is a homeopathic disease in North Dakota.

The Blaze of Pine River, Minn., near Brainerd, says a physician is greatly needed in that place, there being none in the county. The Blaze says: "Let everybody write to everybody for a doctor to locate somewhere along the line."

The graduates of the Training-School of the Winona General Hospital have organized a nurses' association, with a membership of twenty. A fee schedule was adopted, as follows: For all contagious diseases, $25 a week; for all other cases $20 a week.

Dr. Joseph D. Faulkner, of Spokane, Wash., is dead. Dr. Faulkner was a Union spy during the Civil War, and at one time worked among the Golden Circle, whose members attempted to kill him. He afterwards met some of these men in the West.

Dr. Jules Gendron, of Crookston, Minn., has been designated by the French Canadians as the Poet Laureate of the Northwest. He read an original poem of great merit in Minneapolis last month on the occasion of the reception given to the Canadian lecturer, historian and poet, B. Sulte, of Ottawa.

BICYCLING: ITS INDICATIONS AND CONTRA-INDICATIONS

As bicycling involves an extraordinary consumption of energy and is accompanied by relatively slight sensations of fatigue, its place in the treatment of obesity seems to be theoretically established. Bicycling also diminishes the quantity of sugar in the urine in diabetes. In slight degrees of anemia bicycling is of advantage as a stimulus to metabolism; in severe cases this form of exercise makes such demands upon the heart that it is contra-indicated. The use of the bicycle favors assimilation in chronic obstipation. Many writers have noted happy results from the adoption of wheeling by neurasthenics. L. Znutz (Fortschritte d. Med., Sept. 22, 1901.)

NORTHWESTERN LANCET

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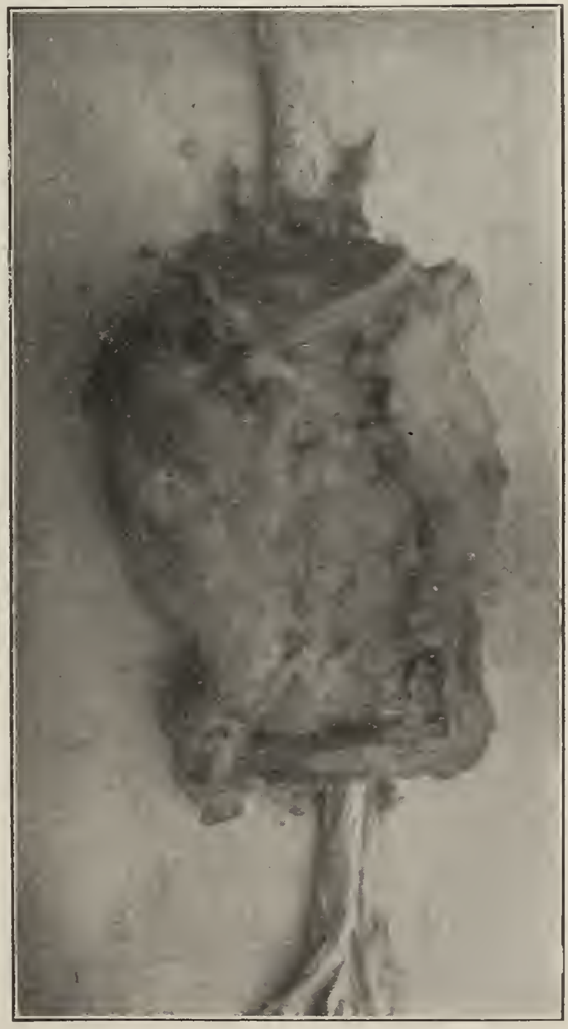
REPORT OF A CASE OF SPINAL SARCOMA

By O. C. Strickler, M. D.

NEW ULM, MINN.

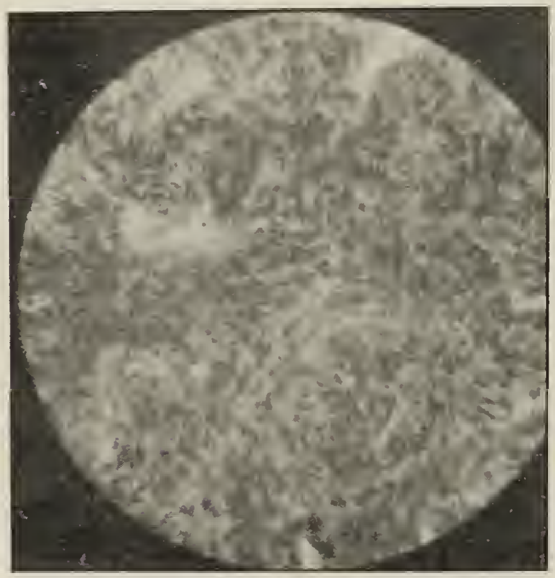
J. H., age 64 years, occupation tailor, born in Germany, had always been in quite good health, with the exception of some disturbance caused by an unusually large inguinal hernia. In the spring of 1900 the hernia became strangulated, necessitating an operation for its reduction. After this he regained moderately good health. For some months, however, following the operation he occasionally complained of irregular pains in both lumbar regions, the pains being occasionally lancinating, but of such an indefinite character that little attention was paid to them, as the patient ascribed them to his constipated habit. Early in May, 1901, he consulted me, saying the pains were becoming more severe, and in addition he complained of a feeling of constriction in the abdomen. A few days later he came to the office, complaining of very severe pain in the lower dorsal region, of such severity that I was compelled to administer repeated hypodermic doses of morphia, but with little relief. Although he lived only one block distant, it was necessary to procure a conveyance to remove him to his residence. After being placed in bed the pain became more endurable, and although his rest was disturbed during the night, still he stated the next morning that he had rested comparatively well. The day following he was able to sit a short time in a chair, and with assistance was able to walk across the room, but from this time on he was unable to leave his bed longer than to allow a change of linen. Although using at times large doses of morphia for the relief of pain, he always ate with apparent relish, and at no time was there any suspicion of malignancy.



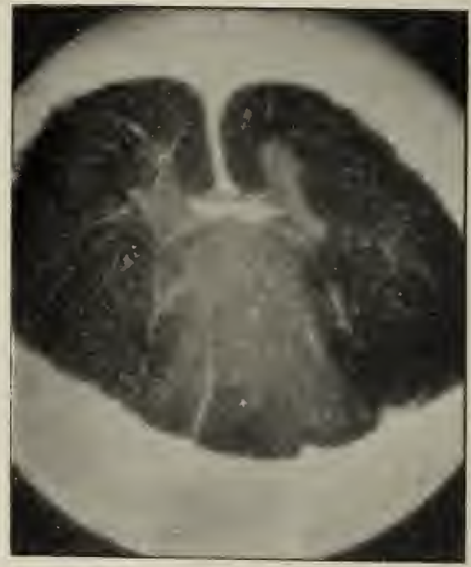
1. Sarcoma of spiral cord (nearly natural size).

One week after the acute attack paraplegia had become complete, and was soon followed by the concomitant conditions of paralysis of the bladder and rectum. He finally died of exhaustion, five months after the paraplegia had become fully developed. The most mortem was conducted by Dr. H. D. Valin, pathologist at the St. Peter State Hospital. Dr. Valin's report is as follows:

Autopsy held on body of J. H. one and one-half hours after death. Pupils slightly dilated; rigor mortis absent; slight opacity of both lenses; edema of lower extremities; large decubitus under both elbows, over sacrum, trochanters and dependent part of scrotum; weight of brain 1,191 grams; marked atheromatous patches at base; some shrinking of olfactory bulbs; pia arachnoid thickened, congested, and opalescent along vessels; vessels filled with blood; choroid plexuses thickened, cystic and granular; no anomaly of fissuration; nuclei at base well marked.



2. Photomicrograh of cord sarcoma (made with a ½-inch objective).



3. Section of cord opposite 7th dorsal vertebra. Sclerosis of posterior columns (of Burdach and Goll).

Examination of the heart showed left ventricle hypertrophied; right ventricle wasted; slight thickening of aorta above valves; atheromatous patches near point of attachment of aortic valves; cavities empty.

A few adhesions exist at apex of both lungs, and a few small metastatic nodules the size of shot exist throughout; both organs emphysematous and crepitant. Right lung weighs 340 grams; left weighs 454.

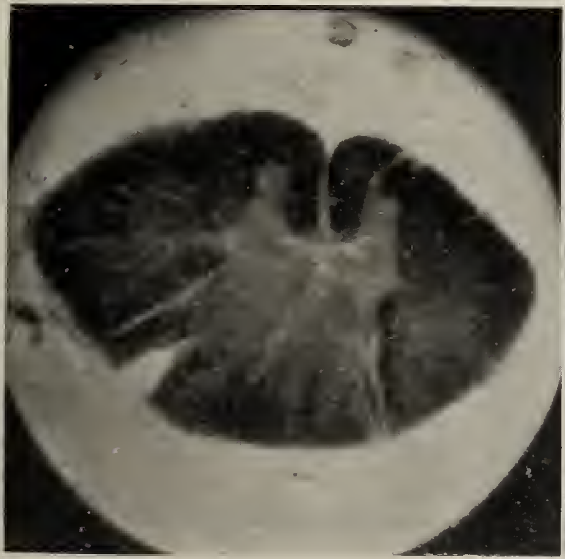
The liver is enormously enlarged, and is the seat of masses of neoplasm. Hepatic ducts are not involved. Liver weighs 2,835 grams. One mass the size of a hen's egg is found in the right lobe, and another somewhat smaller in the left.

Capsule somewhat adherent; organ adherent to diaphragm towards center. Pancreas not involved. Suprarenal capsules both involved, and contain a large metastatic nodule in each. Both kidneys degenerated; microscopic examination demonstrates in addition that a chronic interstitial nephritis existed.

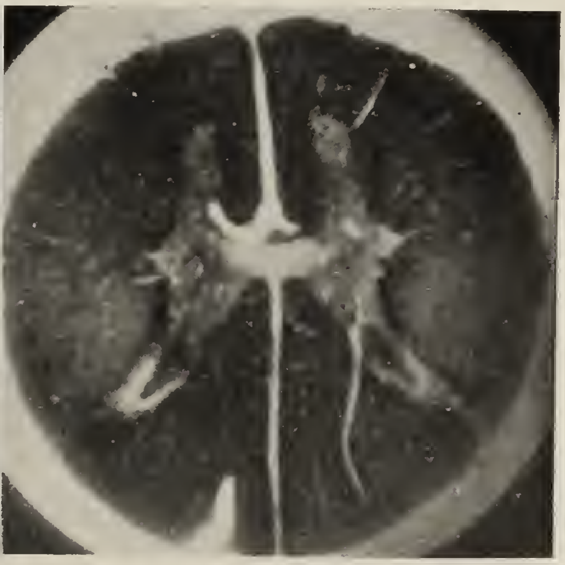
The ninth, tenth and eleventh dorsal vertebræ are involved in a large sarcomatous mass. Length of tumor two and one-half inches, projecting 30 mm to the right of the spine. The growth is a small spindled-celled sarcoma, instead of being carcinomatous as at first believed. Above the seat of the tumor, and opposite the seventh dorsal vertebra, the posterior tracts (Burdach and Goll) alone are sclerosed; just below the tumor opposite the twelfth dorsal vertebra the lateral tracts (crossed pyramidal) alone are sclerosed, and opposite the tumor at the eleventh dorsal vertebra both sets of tracts are sclerosed. The other tracts appear normal. (Sclerosis was shown by the Marchi-Pal method as described in Hamilton's Pathology, Vol. 11, page 718.)

Photomicrographs illustrating all three conditions were made with a 3 to 5-inch objective, giving an amplification of about ten diameters. Posterior ganglia from roots of lumbar nerves show minor pathological changes but no acute or chronic degeneration. The solitary tumor of the spinal cord rests on the dura mater or theca, and seems to have arisen from the loose connective tissue between the latter and the posterior longitudinal ligament of the vertebræ or from the veins lining the bone. The spinal tumor is the primary neoplasm, the remaining nodules are to be considered as metastatic in origin.

The growth having originated external to the periosteum would corroborate the presumption that the acute attack in my office must have been the result of spinal hemorrhage. It is doubtful if the gradual development of a spinal tumor external to the cord would produce such rapid paraplegia without some vascular change. My diagnosis previous to the post mortem was spinal hemorrhage followed by acute myelitis. It is readily seen that where no well defined premonitory symptoms exist previous to a paraplegic attack that a tumor would hardly be suspected. Gowers mentions the fact that sarcomata are usually of slow development; that where we find a focal lesion with gradual increase of functional disturbance, a spinal tumor can usually be suspected. In this feature this case is somewhat unique in the rapidity in which paraplegia developed after the early active symtoms manifested themselves, and also in the absence of any cachectic conditions indicative of malignancy. However, the tumor being of the small spindle-celled variety, the progress would necessarily be more rapid than with other forms, a corroboration of the teaching of neurologists that the symptomatology of spinal tumors depends on the location of the growth, and necessarily also on the nature of the tumor itself. Hence the importance of making a post mortem on all cases of obscure spinal origin, for only in this way can the pathology of this rare but important condition be cleared up.



4. Section of cord opposite tumor (opposite 11th dorsal vertebra). Sclerosis of posterior columns and of lateral or crossed pyramidal tracts.



5. Section of cord below tumor (opposite the 12th dorsal vertebra). Sclerosis of crossed pyramidal tracts alone prevent.

I am indebted to Dr. Valin for the assistance furnished, not only in the post mortem, but also in the preparation of the specimens.

AMYL NITRITE IN SPINAL COCAINIZATION

The three principal disagreeable after-effects following the employment of cocaine intraspinally are: Headache, vomiting, and rise of temperature. According to Dr. Cordero, all these after-effects may be obviated by the administration of amyl nitrite. From three to seven drops on a handkerchief are to be inhaled, and repeated if necessary. He tried this means in twenty-seven operations in the surgical clinic at Parma and with uniform success.

A CONTINUANCE OF THE DISCUSSION OF THE TECHNIQUE IN ABDOMINAL OPERATIONS*

By A. W. Abbott, M. D.

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MINNEAPOLIS

In reviewing the discussion of the excellent paper read by our present president before this society some months ago on "The Preparation and After-Care of Surgical Patients," the thought occurred that it would be for the mutual advantage of those especially interested in any subject brought before this society to continue the discussion from time to time by presenting their individual observations and investigations on the same lines, and so by a comparison of experiences give the opportunity to make a selection of the best methods. In this way many useful suggestions can be brought out, the data for which are not at one's command during an ordinary discussion. This is my excuse for asking the privilege of presenting for your consideration the following disconnected subjects, only generally related because they refer to abdominal operations.

Chloretone in 10 grain doses one hour before the anesthetic (ether usually) has not seemed to lessen the time required for narcosis, nor has it apparently diminished in any marked degree the after nausea and vomiting. It's use is still continued, however, in order to make the statistics more decisive, if possible.

For the last year a 50 per cent mixture of ichthyol and lanolim, after shaving and washing and being left over night until the final washing, has been used with no stitch abscess following, except where pus has come in contact with the wound during the operation. Where pus is anticipated, aristol, freely rubbed into the tissues after the incision has been made down to the peritoneum, has answered better than hydrogen peroxide or other antiseptics.

For attaching a hollow viscus to the parietal peritoneum, the following method has been found most satisfactory. The length of the incision in the peritoneum is made to equal that in the viscus. A black silk thread with two needles is used. One needle is passed from within outward through the fibrous layer of the viscus from the peritoneal side so as to include about a quarter of an inch of the wall, or it may begin on the mucosa and pierce the whole wall of the viscus, then the parietal peritoneum, and then the other tissues, including the skin. One-fourth inch from this, the other needle emerges in the same way, and the suture is then tied over the intervening skin. Sutures are thus passed entirely around the opening. At the angles of the incision the suture is passed across and just beyond the incision in the viscus. This suture is non-absorbable, unites the peritoneum to the peritoneum, and can be removed at any time or left as long as is necessary. In case the organ cannot be drawn out for preparatory cleansing, I have found the preliminary clamping of its walls to the peritoneum by fine artery forceps very serviceable. The stitching can then be done without soiling the peritoneum. Theoretically, there would be danger of infection along the track of the sutures when first introduced through a germ-bearing surface, like the mucosa, but, practically, no such result has followed.

In fecal fistula, high in the bowel, the skin surrounding the opening is intensely red from chronically enlarged capillaries. The incision is frequently followed by a profuse bleeding from the whole surface as if it were one vessel. Adrenalin chloride, 1 to 5,000 solution, checks the hemorrhage in about one minute. It should be sopped on freely. Any one who has tried hot water, clamps, or pressure will appreciate this agent.

Every operator has observed that a small incision in the abdomen, with a very little exposure of the contents, is followed by a very trivial disturbance of the patient, while with great and prolonged exposure the shock is great, the reaction slow, and peritonitis a more common sequel.

In conducting some experiments, assisted by

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*Read before the Minnesota Academy of Medicine, January 8, 1902.

Drs. Fligman, Condit and Dart, to determine the immediate effects of exposing the intestines, the following facts were pretty positively demonstrated: 1. That there was no appreciable loss by evaporation, as determined by weight, and that the red-blood count and the hemoglobin estimate remained practically the same during the thirty minutes, and that there was only a slight increase in the number of leucocytes during the same period of exposure. 2. That the loss of heat, in a room with a temperature of 72° F., during the same period was from 10 to 15 degrees on the bowel surface, about three degrees in the rectum, and 11 degrees within the exposed bowel. 3. That a distinct drying of the peritoneum began to be manifest in three minutes, and increased during the thirty minutes exposure until there was a distinct wrinkling, and all loss of gloss in the peritoneum, but without any evident diminution in the size of the blood-vessels, or in the rapidity and force of the blood current in the capillaries. Now, the loss of heat is due to the evaporation of water, and to direct radiation. The loss of water in two dogs with intestines fully exposed for thirty minutes was less than one-half ounce; in fact it could not be determined by the scales that were used, but was certainly not over that amount, and yet it was enough with the radiation to reduce the internal intestinal temperature eleven degrees. The drying of the peritoneum, due of course to the same loss of water, undoubtedly reduces the vitality of the peritoneum, and according to our present theories makes it less resistant to germ invasion. It is therefore necessary to prevent evaporation as much as possible, and to make up the unpreventable loss. For this purpose I use rubber dam-sheets, about 14 inches square, next to the exposed bowels and peritoneum. These can be covered with dry gauze pads to soak up blood, pus, etc. The rubber need not have tapes or forceps attached, as it is not discolored by the blood, and can always be readily found. The unavoidable loss of fluid is anticipated by the use of an enema of hot salt solution just before the operation. That this is effective is shown by the fact that the absorption is so rapid that the bladder often fills before the patient is removed from the table, necessitating the use of the catheter. If there has been an unavoidable exposure sufficient to dry the peritoneum it is wise to pour into the cavity a small amount of normal salt solution, otherwise it seems unnecessary.

The ureteral catheter in abdominal operations enables the hand in the abdomen readily to detect the position of the ureter, which sometimes is almost an impossibility without it. In a case of hydronephrosis due to a bent and adherent ureter, the catheterized ureter was quickly found, and as the adhesions were dissected the catheter was pushed along, showing positively the exact status during every stage of the operation, so that what would have been a most difficult and prolonged operation was easily completed in thirty minutes. In tumors of the broad ligament it is extremely useful in avoiding the cutting or breaking of the ureter. Unfortunately, however, it can be introduced but a short distance in some of these cases where we need it the most, for it cannot be made to pass the acute curves and pressure points made by the projections of the tumor. Its introduction even a short distance may, however, be of service in giving the clue, in some measure, to its direction and position. In enterovesical fistula it is almost a *sine qua non.* In addition to the soft catheter in the ureter, a metallic probe should be passed into the fistula. The fistula and ureter can thus be differentiated, and the dissection immeasurably assisted. This is of course done through the cystoscope. It is not difficult to distinguish the ureteral orifice from the fistulous opening, which usually lies near it. In one instance I was able quickly to find the ureter while the patient was in the Trendelenburg position and in the middle of an operation after the abdomen had been opened. The reddened, raised opening of the fistula was positively identified.

In tubercular peritonitis I have twice distended the abdomen with pure oxygen. At the end of the operation the peritoneum was closed as usual, and the worm-gut sutures introduced, but not tied. The tube of an oxygen apparatus was then introduced between the stitches in the peritoneal seam, and the oxygen allowed to flow until the abdomen was fully distended. The tube was then withdrawn, and the worm-gut sutures quickly tied, leaving the abdomen distended with the gas. The very rapid improvement to good health in these two cases will induce me to try it again, although I have seen about as good a result in one or two cases treated in the same way without the oxygen.

In closing the abdominal wound, the double figure-of-eight worm-gut is used. The peritoneum is closed with continuous catgut, and tied with at least three knots. The worm-gut is threaded on two needles. One needle is passed down through the theca of one side, includes as much of the muscle as is necessary, and then passes up to the same level on the other side. The sutures are now crossed and carried through the fat and skin of their respective sides, one-quarter inch from the edge of the skin. The sutures are now drawn upon, when the theca will be found to slightly overlap along its whole length. The wound is dried, and while the assistant holds the rest of the sutures taut, the first at one end is crossed again and then tied over a roll of iodoform gauze, which is long enough to reach the whole length of the incision. All of the sutures are tied in the same way. The sutures are left from twelve to fourteen days. There has been no hernia in any case and no stitch abscess, except where anticipated on account of pus having been dragged over the wound. After incisions at a distance from the median line the sutures are introduced in the same way, beginning under the fat.

Immediately after every suprapubic abdominal operation, it is the routine practice to give an enema of one-half ounce of sulphate of magnesia in one pint of hot water. This is repeated every six hours until the bowels move, or gas is expelled. The bowels almost invariably move within forty-eight hours, often within twenty-four. It supplies the needed fluid, which can not at first be given by the mouth, and at the same time saves the giving of cathartics. This I consider a most important therapeutic measure, and believe that it has tided over several desperate cases which without it could hardly have recovered.

In conclusion, I wish to call your attention to two pathological conditions which I have found during abdominal operations, but which I have been unable to find any account of in the literature. In two cases of purulent appendicitis there have been masses, about one inch long, one-half inch wide, and apparently one-quarter inch thick, in the cecum near the base of the appendix. They were hard, projecting slightly above the bowel surface, which was here reddened, although the overlying peritoneum seemed otherwise healthy. It was inferred at the time that they were the bases of cecal ulcers. In each case the patient was young, and the progress to perfect health was not apparently influenced by leaving these masses undisturbed, as was done in both cases.

The other condition is a phlebitis of a vein in the vicinity of an inflamed area, but entirely separate from its circulation.

In a case of appendicitis with a rapidly distending abscess, the abdomen was opened parallel to the right rectus and about opposite to the umbilicus, where the abscess was already pointing. The overlaying tissues were already edematous. On the side toward the rectus a large vein, probably a branch of the superior epigastric, was exposed lying just outside of the parietal peritoneum. It was brown in color, and would not empty when compressed distally. The blood was evidently coagulated in an inflamed vein, and the bacteria must have invaded the vessel from the contiguous germ-laden tissues. An unfavorable prognosis was immediately given to the family, which proved to be correctly made. On recovering from the anesthetic the patient's pulse within an hour went to 148, and the respiration to 44 per minute with a constant demand for fresh air. Great relief to the sense of suffocation was afforded by the frequent exhibition of oxygen, but the case terminated fatally in forty-eight hours. There was no occasion for shock in this case, as the abscess was merely opened, the sloughing appendix easily removed, and the cavity drained without suture. There was no autopsy, but there were no indications of peritonitis. The temperature was 99° F. on the day of death, and the cyanosis and suffocation could be attributed only to obstruction of the pulmonary arteries. This condition may account for some fatalities, the cause of which has been difficult to explain.

DEATH FROM SPINAL COCAINIZATION

At a meeting of the Sociètè de Chirurgie, Dr. Legeu reported two cases of immediate death following subarachnoid cocainization. In each case the dose injected was less than ⅛ grn. One of the participants in the discussion that took place after the reading of the report said that this method, which has not even the merit of inducing anesthesia with absolute certainty, should be altogether discarded.

THE PLACE OF SPECIALISM IN THE EDUCATION OF THE UNDERGRADUATE*

By Frank C. Todd, M. D.

Clinical Professor of Ophthalmology and Otology, University of Minnesota

MINNEAPOLIS

Such vast changes have been wrought in the practice of medicine in the past quarter century that medical schools have had a perplexing problem to solve to keep pace with these advances. We find mixed with the new ideas of teaching much that is old and not worth perpetuating. With the development of the science of medicine and surgery and the advent of bacteriology, laboratory teaching in chemistry, anatomy, histology, physiology, and pathology, now necessarily occupy more time than was required only fifteen years ago to finish the entire medical course. In addition to this laboratory work and the subjects which were taught at that time, there are the added chairs of the various branches, not to mention such courses as mechanotherapy, history of medicine, hygiene, sanitation, etc. All of the branches, including the original fundamental subjects of practice, surgery, and obstetrics, and the various specialties, have enlarged their scope, demanding more time for their teaching. Clinical teaching, in the meantime, has been increased to a great degree, and altogether we find each day more filled in the medical curriculum now, when a medical course in a high-grade college consists of four years, of eight months each, than when only two years, of six months each, were required.

If you will study the schedules of the various leading medical colleges you will be surprised to find every day so full. You will find in the senior class that about 30 hours per week are required; that in many colleges a senior student is carrying from 16 to 20 branches, and you will be able to realize how little time remains for study and digestion of the knowledge he is trying to gain. You will see that there must be further reform, and along the following lines:

1. Changes in the methods of teaching.
2. Concentration.
3. Elimination.
4. Establishing of elective and optional courses.

1.—Changes in the Methods of Teaching. Methods of teaching are undergoing evolution. The advent of section teaching and the increase of teaching by clinics, demonstrations, and laboratory work is praiseworthy, but we are still clinging too much to the time-honored custom of didactic lecturing. Many of our teachers are successful practitioners, and are able by virtue of their experience to give good clinics, and because of their large practice they can furnish the material for these clinics; but because they are good practitioners, it does not necessarily signify that they are good lecturers. It would not seem wise to discontinue the didactic lectures, for they are of undoubted value when given by a good talker or illustrated in some manner that will enable the student to retain what he hears, as, for instance, by the introduction of cases, specimens, drawings, or the use of the microscope or stereopticon.

The student should not be obliged to so occupy himself taking notes that he will miss much of the lecture, and to avoid this we should have text-books adapted to the student's needs and from which lessons may be given. This recitation method of teaching is of extreme value, and is much neglected in the last year of the medical course. If desired, the regular lecture course can be given by one of the professors, for instance, and the recitation course by one of his assistants. Without recitations, how can we tell how much the students have learned? Perhaps some teachers feel, as one professor of an important fourth-year branch expressed himself, that the student who has successfully passed the first three years in his course, should be allowed to graduate whether he passes a successful test or not the last year. It is evident that this professor is not alone in this thought, for it is a notable fact that in most medical colleges, students are usually passed in all or most all branches of the last year.

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*Read before the Minnesota Academy of Medicine, March 5, 1902.

It seems to be a principle with some teachers never to condition a student under any circumstances. As well abolish the last year altogether as to make a farce of it. It is unquestionably the most important of all to the embryo doctors, for it covers the subjects of practice, surgery, obstetrics, gynecology, pedology, neurology, dermatology, ophthalmology, otology, laryngology, and several other important branches. If every teacher took this attitude in the last year, many students would graduate with a very poor knowledge with which to start in practice. Unfortunately, there are always some students who are willing to finish with the least amount of work possible.

As a matter of fact, the first three years are only a preparation for the last year. The last year should be the most stringent, the requirements should be the most severe, and the sieve the finest, lest some really unfit men who have slipped past the advance guards be turned loose upon the community.

2.—CONCENTRATION. By this is meant the concentration of a branch within a shorter period, completing ophthalmology and otology, for instance, in eight weeks by having four hours a week, instead of spreading it over thirty-two weeks of one hour a week. Concentration may be so arranged that the student will carry one-quarter the number of studies now required. It will enable him to remember from one lecture to another, and prevent confusion that is bound to exist when he is burdened with so many branches.

3.—ELIMINATION. By elimination is meant the elimination of unimportant branches and irrelevant portions of important branches. This matter of deciding what should be eliminated is a difficult one. In earlier days the special branches were taught by the general practitioner and no attempt was made to teach him details which the general practitioner will never have occasion to use in his practice—though he practices 50 years; or if he does have use for them he will have forgotten them long before he has occasion to use the knowledge, while he can easily post himself when the necessity arises. There is a vast difference of opinion among teachers of the same subject as to how much should be required. This is shown by studying the various college catalogues. We find in ophthalmology and otology, for instance, that in Columbia University there is no didactic teaching and only 52 hours of clinical teaching, while in the University of Pennsylvania 56 hours of didactic and 64 hours of clinical work are required, and there is as much more optional clinical work. It seems therefore that the specialist is not the one to fully decide how much time should be allotted to his branch, but that the general practitioner should aid him in outlining his course.

Professor Burnett, of Washington, an eminent teacher in ophthalmology, believes that we should teach not only all of the diseases of the eye but ophthalmoscopy, refraction, operations on the eye, and even retinoscopy, but how on earth he finds the time to give them this knowledge I cannot understand. A proper knowledge of refraction alone requires an entire year of continuous study and experience, and a superficial knowledge, such as could be gained in the time at the undergraduate's disposal, is worse than none at all. I believe there are certain portions of ophthalmology—and this is true of every special branch—which are essential to the general practitioner, especially if he is located in the country; for instance, the knowledge of how to differentiate glaucoma from iritis, because each of these affections requires immediate attention, or the patient may go blind, and because the treatment of these two diseases being opposite a mistake would be fatal to sight. He should be taught also how to attend to those things which he will meet commonly in his practice, even though they are not of a serious character. Not only should these things be taught, but the student should be required to learn them, and if he fails to pass a satisfactory examination he should not be allowed to graduate, for he would not be a safe practitioner. He should be taught what things he can do with safety and what things are dangerous in unskilled hands, for "fools rush in where angels fear to tread," and many lives are sacrificed as a result of the ignorance and assurance of those who do not know their limitations.

We are, however, going to the extreme and trying to teach too much. We are giving too much detail, and are wasting valuable time in the attempt to cover the entire subject, with all the theories and varieties of diseases that to us as specialists seem important. Neurologists, dermatologists, ophthalmologists, and other ologists, who work along specific lines, are apt to become narrow and overestimate the importance of their particular branch, and to forget that there are other branches more essential in fitting a man for practice. We must bear in mind that we are educating our students to become general practitioners, and it is not within the scope of the undergraduate medical college to make specialists of them. If we occupy more of their precious time than is necessary to teach them only those things which are essential in their general practice, we are stealing time which should be devoted to more important subjects. We can not increase the length of the course, for now that the requirements for admission to the medical college are so stringent and a year or more is spent in a hospital after graduation, a student does not begin to earn his living until he is 25 or 30 years old, hence we must cut down in some way lest we crowd out the fundamental branches. In the fourth year the fundamental branches are practice, surgery, and obstetrics, and for these the special branches must take a back seat.

In this process of elimination then we must require only as much time in the teaching of special branches as will give the student a practical knowledge of those diseases and conditions which are the most common and the most important.

3.—Elective and Optional Courses. Elective and optional courses to supplement the required courses, which will cover as fully as the time allotted, will give time for those less important portions. In order to avoid possible confusion, I will define the words elective and optional, and I can best do this by quoting from Professor John Milton Dodson, of the Medical Department of the Chicago University, where the elective course is in full force:

"First, then, what is the elective system? Election may be defined as that method under which the student pursuing a certain course looking to the acquisition of degree or diploma, is allowed some choice in the courses of study which he may take. To illustrate: In the Chicago University credits are reckoned in majors, a major comprising 60 hours of didactic or recitation work, or 120 hours of laboratory, practical, or clinical work. About 12 majors are required to be accomplished in each of the four years. Of the twelve majors of the senior year, it is proposed that about seven majors be in specified courses, which every student shall be required to take; for the remaining five majors, he may elect from a number of courses aggregating, say, 15 or 20 majors, a sufficient number to make up the twelve required. The term 'election' is not applied to those studies which are taken by special students who enter the college with no intent of completing the course and receiving the degree. It is convenient, furthermore, to distinguish between elective and what may be called 'optional' courses, an optional course being defined as one which a student may take in addition to his regular work, but which is not accepted as part of the required majors of study, and for which no credit is given, excepting, perhaps, a special certificate setting forth the fact that the student has taken the said optional course. Election may be permitted the student in one or more of the following respects:

"1st.—Choice of subjects.

"2nd.—Choice of teacher, or

"3rd.—Choice of the method of study.

"In the election of subject the term applies not so much to choice between major branches, as, for instance, between anatomy, physiology, chemistry, and the like, but to choice of topics or portions of each subject.

"In the election of teacher, the several instructors in a particular department may offer courses on the same topic, or courses on different topics, in which latter case the student choosing a particular course would have choice of both subject and teacher. In the matter of method, choice may be afforded a student as to whether he will pursue didactic lectures, by recitation or a subject taught by laboratory instruction, or by one or more of these combined.

"To the teacher the elective system presents the advantage of the greatest possible incentive to good work. An instructor whose students are required to be in attendance upon his lectures, whether they would or no, is under no obligation to make his course the best possible, and he is very prone to become careless and indifferent in his teaching work. If, on the other hand, the attendance upon his classes is left to the choice of the student, who is at liberty to elect other similar courses taught by other teachers in the faculty, that attendance will depend solely upon his efficiency as a teacher, and constitutes a continual and most powerful inducement to the best work.

It is, however, the testimony of all who have had to do with the elective system that the greatest benefit which results therefrom is the difference in the spirit which animates both student and teacher. It is wonderful, indeed, to observe the difference in the interest, the enthusiasm, and the energy with which a student will pursue a course of study which he has himself chosen, in contrast to that which he manifests in a course that he has been compelled to take. I have seen this illustrated many times in students under my own observation, who have entered upon the study of medicine after pursuing a college course. The record of such a student may have been very indifferent in the literary college, the subjects in which did not especially appeal to him. Having decided, however, upon medicine for his life-work, and with, perhaps, an inborn taste and aptitude for the kind of work which is offered in the medical curriculum, he becomes, as it were, a new man when he enters a medical college, and the difference in the spirit which animates him, the energy and enthusiasm which he displays in his work is gratifying indeed."

After the elective system had been in course of operation for a year in the Chicago University Medical Department, the University Record of the Chicago University makes the following comment:

"The increased enthusiasm and interest which was anticipated under this system, has been fully realized, and not less among the members of the faculty than among the students. Stimulated by the thought that students registering for a particular course had done so voluntarily, and not by the compulsion of college rules, some of the teachers of the faculty have been animated as it were, by a new spirit; and some of the branches, especially those of a clinical nature, which were formerly poorly attended, and from which students were constantly seeking to be excused, have been largely attended, and the students have signified, in an emphatic manner, their appreciation of the change in the character and efficiency of teaching.

"The fear which had been expressed in regard to the elective system, that the students would seek to specialize and would concentrate their energies upon certain lines, to the neglect of others, has proven to be quite groundless. There are efficient safeguards against this abuse."

The elective system has been in operation in the academic departments of the various universities for ten or fifteen years, and I feel sure will be generally adopted by medical colleges, with certain limitations which time will not permit specifying.

I recognize that there has been a great advance in the methods of teaching, but I believe that we practitioners, who are so busy with our practice and scientific studies, are not giving proper attention to this subject, and that if we accept the responsibility we should perform our duty and devote more time and thought to the subject of medical teaching.

CREOSOTE IN PENUMONIA

In order to prepare a statistical table showing the results of the treatment of pneumonia with creosote or creosote carbonate, I ask the aid of the profession.

Let every physician who has given the treatment a trial send me on a postal card during April, 1902, the number of cases treated and number of deaths. State whether of record or an approximation.

Please answer yes or no to the following questions:

1. Do you believe creosote ever aborts pneumonia?

2. Do you believe the majority of cases are mitigated by it?

3. Have you found cases which, having plenty of time, were entirely uninfluenced by it?

To every one favoring me with a report, I promise to mail a copy of the condensation of reports.

If the remedy is what some of us think, the world ought to know it. If we are deceived we ought to be undeceived. Therefore send on the reports.

I. L. Van Zandt, M. D.
Fort Worth, Texas, March.

OSTEITIS DEFORMANS

By O. A. Fliesburg, Ph. G., M. D.

NORTH BRANCH, MINN.

In the Philadelphia Medical Journal, of February 15, 1902, appears an article on this subject by the able pen of Dr. C. J. Wilson. As it has been my lot to see a case of this disease in my immediate family, and as it appears from the above article that the disease is of rarer occurrence than I supposed, I think it my duty to report the case, although my notes and observations are imperfect, partially due to modest reticence and shyness on the part of the patient.

Previous History.—Family record excellent; married at 21; has had scarlet fever, measles, typhoid, pneumonia four times, hemorrhoids, and la grippe; has had five children, the oldest 40, the youngest 18 years. About eleven years ago she first noticed a curvature of the left leg. Onset of disease was marked by intense pain in left knee and ankle-joint, especially nights, resembling rheumatism of an inflammatory character; soon afterwards she noticed a slight outward bending of left lower limb, making it curve in a semicircular or bowlike manner, forwards and outwards. The disease progressed slowly with occasional exacerbations, always accompanied with great and intense pains in joints and bones on the affected side. She became shorter in stature, and her carriage, before erect, became leaning forward with inclination of chin to sink down towards chest. As the disease progressed she walked more and more with a painful waddling gait. In the last years she often lost her balance and fell. The disease seemed for some years to be at a standstill, and there was no involvement of other long bones; but about four years ago, after an acute and severe attack of la grippe, with great pulmonic disturbances, the disease seemed to take a fresh start, and affected the corresponding bones of the opposite limb, but never to such an extent or degree as on the left. In the last two years the upper extremities have also become affected, i. e., the radius and ulna, but more on the left than on the right; also hip-bones, sternum and ribs. After another attack of la grippe in the winter of 1900-1901 a new impetus was given to the disease. In 1901, in the summer, her health became very poor; she had a severe cough and suffered from dysentery and general and extreme prostration. On examination her left lung was apparently entirely atrophied; there were räles and rhonchi over the whole surface of the right lung. Let me mention here that for years the patient had suffered from winter coughs. The chest was flat and barrel-shaped,—flattened in front, bent in on left side, and sunk at about the fourth or fifth rib, making an hour-glass contraction. The abdomen was flattened, and a sulcus was present right below the ribs. The pelvic bones were prominent and seemingly increased in size. The ostium vaginale was deep and seemingly displaced. There was only slight cervicodorsal kyphosis, or enlargement of shoulders. There was no involvement of the facial or cephalic bones, the expression and form of face being natural. On January 29th, 1902, she was again taken down with a somewhat severe attack of la grippe, and on February 1, an acute catarrhal pneumonia developed. She became at once unconscious, and soon sank into a semicomatose condition, which deepened into coma on the second day. She remained in that condition until death, which took place early on the fourth day from accumulation of phlegm and subsequent dyspnea. In this case all the muscles were atrophied, and there was extreme emaciation; whether the atrophy was genuine or only apparent on account of the extreme emaciation, I leave to others to decide. She suffered extremely at times from pains, and during the last year she had constantly to use hypnotics to obtain sleep. I have reason to think her insomnia due mostly to nightly excesses of pain.

There are two observations I want to make upon the subject.

It seems to me that a certain relationship exists between osteitis deformans and pulmonary diseases. Several of the cases recorded in medical literature have suffered from pulmonary troubles, or else, like this case, death followed from pneumonia. In some cases repeated attacks of pneumonia have occurred.

The other observation is in regard to the possibility of heredity in this disease. There seems to be a possible tendency of inheritance. The case under discussion was my wife; and her daughter, now 38, the mother of four children, oldest twelve, youngest 4 years, three living, noticed about four years ago or soon after her last confinement, a slight curvature of both lower limbs. There are at times periods of quite severe pains, but the disease seems at present to be at a standstill. Her sister, married, one child, one miscarriage at two months, also noticed about a year ago a slight bending of the lower extremities, accompanied by dull pains. She is now 35 years of age.

I give the latter observation as a clue to other observers that they may either verify or deny its correctness. I am sorry I cannot accompany my short note with photographic illustrations, but Fig. 3 in Doctor Wilson's article so closely resembles the appearance of the upper and lower extremities in my case that no better illustration could be given.

I hope my short note may stimulate others to search for and report other cases, as I am inclined to believe the disease not so rare of occurrence as Dr. Wilson's article would lead us to believe. The duration of this case was about 12 years, with death due to pneumonia, an intercurrent disease, thus substantiating the observation of earlier writers that death does not appear to be directly due to the disease, or that it can be thought responsible for the fatal termination.

WHOOPING-COUGH AND QUARANTINE

By E. S. Strout, M. D.
MINNEAPOLIS

That whooping-cough is a preventable disease will be admitted by all; that it has a rather high mortality rate can be readily proven; that an effective quarantine will as surely prevent its spread as it will that of smallpox or diphtheria no one can dispute. It is true that older children and adults are not usually ill enough from the disease to be confined to their beds or even to their homes, and the same is also true of those convalescing from light forms of diphtheria and scarlet fever, but why permit the contagion of one to be carried about and not the other? In infants under six months of age it is even more fatal than scarlet fever or diphtheria, with the exception of the laryngeal form of the latter disease.

The mortality tables given by Dr. Gould, in his paper entitled "Disease and Sin" (American Medicine, Aug. 31 and Sept. 7, 1901), place whooping-cough among the dangerous diseases.

The following statistics of Newsholme appear in his paper, giving the "average death-rates for England annually from 1891 to 1895, per 1,000,000 persons living: Smallpox 20, scarlet fever 182, diphtheria 253, whooping-cough, 398."

He quotes in the same article, from the American Year Book of Medicine and Surgery, 1900, figures taken from the "Vital Statistics" of Germany for 1895, which gives the death-rate per 1,000 as follows: (I quote only the contagious diseases most common in children) "Diphtheria 6.34, whooping-cough 3.88, measles 2.68, scarlet fever .64." The mortality rate per 1,000 in Italy for 1897 is given as follows: "Diphtheria 2.83, whooping-cough 2.53, measles 1.96, scarlet fever 1.24." These figures do not tell the whole truth for many cases of whooping-cough are terminated fatally by some intercurrent malady, such as pneumonia. It is a distressing disease, and many children are months and even years in recovering from it. Their development is arrested, their respiratory organs weakened, and their vital resistance lowered to such an extent that they become fit subjects for tubercular infection. Statistics show that such a sequel is not uncommon.

The principal objection to quarantine is that the child needs fresh air and sunshine to hasten its recovery. This I will admit, at the same time maintaining that the child can be given the benefit of these remedies under quarantine.

In very cold weather these patients should be kept in-doors, in well lighted and well ventilated rooms, but on pleasant days they should be taken to the veranda or into the yard under proper supervision. They will not suffer from such a quarantine nearly so much as the scarlet-fever case that is confined to a single room for weeks until desquamation is completed.

I do protest most emphatically against taking children who are suffering with whooping-cough into street-cars and other public places, thereby exposing others to a dangerous disease.

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MAYOR AMES' INSPECTION

The recent order promulgated by medical Mayor Ames, of Minneapolis, requiring each inmate of the various houses of prostitution to submit to a weekly examination, has called forth newspaper comment, and stirred up indignation among the women and sarcasm from physicians. Two young medical men from the city hospital staff have been detailed for the work, and are to receive one dollar from the examined for each examination. There are about three hundred prostitutes in the recognized houses in the city. At this rate each medical man must examine and diagnose the presence or absence of disease in twenty-five women each day for six days in each week, Sunday being presumably observed as a day of rest, but on Monday the procession will parade for another week, and so on until the folly of the procedure is recognized.

From a scientific standpoint the investigations will be absolutely worthless. No well-qualified physician would venture an opinion upon such superficial investigation, hurriedly made, as it must be for lack of time. No bacteriological examination can be made, under present conditions, of so large a number every week, consequently infectious diseases will frequently be overlooked.

The system has been tried in other cities, and abandoned as useless, unjust and unsatisfactory, as every intelligent medical man will testify. From present indications and from experiences elsewhere, it looks as if someone was indulging in the game of extortion.

QUARANTINE HOSPITAL RECORD

Dr. P. M. Hall, Commissioner of Health for Minneapolis, reports that since the opening of the new quarantine hospital, January 26, 1901, there have been treated up to March 10, 1902, 426 cases of smallpox, without a death. These cases have varied from the mild, with a few eruptive spots, to many that were confluent and some that were purpuric. The average time of detention in the hospital has been from fourteen to eighteen days; forty-two days being the longest one patient was detained. The treatment is almost wholly by antiseptic baths, twelve tablets of bichloride of mercury to each bath. Outside of this, if complications arise, the treatment is symptomatic.

There have been almost no complications, not even the most frequent, abscesses. The patients do not need or receive internal medication aside from an occasional laxative. The use of ointments has been discarded, as they interfere with the antiseptic bath.

Patients are kept on a light diet until pustulation is complete, then full diet is given. Dr. Hall maintains the efficacy of the antiseptic bath as shown by the surprising rapidity with which the disease runs through its various stages, the infrequent pitting of the skin, and the speedy improvement after the first bath, even in severe and confluent cases.

The establishment of a modern quarantine hospital, where patients can be properly and intelligently treated, is worth many times over the cost of the building and its equipment.

It is admitted that the disease, on the whole, is mild, but the number of deaths reported from outlying counties without hospital facilities demonstrates the necessity of such an institution. If no such hospital existed, and the health department were less energetic in their efforts to control the situation, there is no telling how grave the epidemic might become. It is fortunate that the antivaccinationists are in such a well protected situation, or some of them would be quarantined in their own houses. The epidemic still rages and the intelligent people are submitting to vaccination without compulsion.

NEEDLESS OPERATIONS

It is instructive and refreshing to read an honest, frank statement of facts, such as were embodied in an article in The Boston Medical and Surgical Journal of January 16, 1902, by Dr. John C. Munro, of Boston, on "Needless Laparotomies, With a Report of Eight Cases."

"These cases were those in which no surgical lesion could be discovered at operation in spite of the fact that the symptoms, so far as they could be analyzed, led definitely to a diagnosis of some grave surgical trouble within the abdomen."

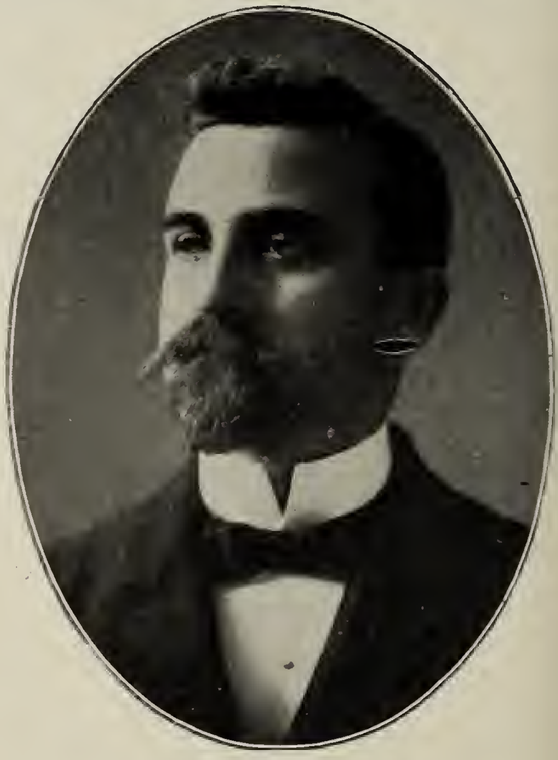
The surgeon says, further, that the diagnosis was open to criticism and suggestion, and was speculative by necessity. The eight cases include acute phosphorus poisoning, hypertrophic cirrhosis of the liver, two cases of nephritis, two cases of alcoholism (one with morphinism), a case of obesity, and one of supposed pancreatic cyst.

In some of the cases painstaking examinations were made, while in others it was purely routine under the existing circumstances, yet all were debated, and the exploration advised or undertaken after excluding many possible diseases. Such an array of internal diseases coming under the surgeon's knife offers many points for discussion, yet it is often the only method of arriving at a diagnosis, and perhaps it is better on the whole to know rather than to speculate on many of the chronic, misleading and undiagnosed forms of disease.

Many patients who occupy beds in the larger city hospitals are brought in suffering from such acute symptoms and with such meagre and unsatisfactory histories that relief is imperative, before a careful analysis of symptoms is possible. Often such cases are on the verge of fatal collapse, and the surgeon feels justified in operative exploration. In the case of hypertrophic cirrhosis and with the patient who had a history of gastritis and nephritis and the man with obesity, the exploration was done without harm; indeed, in the first two the operation was followed by speedy relief of all symptoms. The surgeon who trephines for possible brain tumor or other focal lesion, is frequently disappointed in his failure to locate the disease, and yet the patient makes a full and complete recovery from what seemed to be an advancing destructive process. Evidently, the same thing applies in abdominal work, as shown by the above report, and as often found to follow where only an ascites or a tubercular peritonitis is present.

In spite of such reports, the few cases that are benefited by a needless exploration are not to be compared with the many in which erroneous diagnoses are made and the patient subjected to needless or harmful surgery.

The paper of Dr. Munro is well worth reading, not only for the fearless and open report, but for his evident care in the study of his cases, his association with other men in his consultations, his admissions of error in diagnoses, and the difficulties which are thrown about the physician and surgeon in their efforts to ascertain actual conditions. Such an article is helpful in many ways, and illustrates anew the necessity of closer application between surgeon and internalist.



ROLLIN E. CUTTS

MINNEAPOLIS

Rollin E. Cutts, B. S., M. D., died of cerebral hemorrhage on March 19th. His loss comes as a great shock because he was such a splendid specimen of physical young manhood that we considered him as just fairly entering into the splendid career we all predicted for him.

One feels no embarrassment in writing an obituary notice of Dr. Cutts, for there is nothing in his whole career as a man or as a physician to cover up, and there is nothing we can say of him so good that it would be flattery. He stood among us unreproached and irreproachable.

He was born at Forest City, Minn., in 1865. He received the degree of B. S. from the University of Minnesota in 1890, and the degree of M. D. from the same institution in 1893. Since his graduation in medicine he has made repeated trips to New York City for post-graduate work. He was a member of all local medical societies and of the Western Surgical and Gynecological Association. He was Assistant Surgeon to the Northwestern Hospital, Gynecologist to the City Hospital, and Clinical Instructor in Gynecology in the University of Minnesota. He passed his whole professional career in Minneapolis, beginning as interne to St. Barnabas Hospital. In the short space of nine years he has established a large general practice, and has acquired a most enviable reputation as an obstetrician and gynecologist. He was already turning away general practice, and intended in the near future to limit his practice to surgery. He has been a constant contributor to medical literature, beginning quite early in his career.

Dr. Cutts was an acknowledged leader among the younger generation of medical men in Minneapolis, and is held in the highest esteem by the older men. To his seniors, many of whom had been his teachers in former years, he never ceased to show that same degree of respect he had shown them as a student; and to his juniors, many of whom came to him for counsel and advice, he was always an equal. Few men are so universally loved and respected by their co-workers as was Dr. Cutts, for, notwithstanding the fact that he was a man of positive opinions, and had the courage to defend them, he was always open to conviction, and had a proper regard for the opinions of others.

He was a country boy of modest and retiring disposition, who undertook a city career with many misgivings as to his success, but he was endowed with the genius of hard work and persistent effort. He did the best he knew under all circumstances, and was constantly striving for better things. The result is a place in the profession and in the hearts of his patients of which any man might well be proud.

As a man Dr. Cutts was no less esteemed than as a physician. He was a loving husband, a kind father, and a good citizen. His absolute honesty and his exemplary habits served alike as elements of his own success and as an example to others.

James E. Moore.

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

R. O. Beard, M. D., Secretary

Stated meeting, Wednesday evening, March 5, 1902, at the Hotel Ryan, St. Paul; the chair being occupied by Dr. A. B. Cates, as president pro tem.

Dr. F. A. Dunsmoor, of Minneapolis, reported a case of sarcoma of the femur, of which a full account, with illustrations, will be given in the next issue of the Lancet.

Dr. O. C. Strickler, of New Ulm, presented a report of a case of spinal sarcoma, accompanied by a report of microscopic examination of postmortem specimens made by Dr. H. D. Valin, who was present as a guest of the Academy.

In discussion Dr. Talbot Jones, of St. Paul, inquired if Dr. Strickler regarded the spinal disease as primary, since it was usually of secondary form, only one hundred and forty cases having been reported of a primary character.

Dr. Strickler replied that it was undoubtedly primary, since primary sarcoma of the liver is not multiple.

Dr. J. Clark Stewart, of Minneapolis, said that the nodules in the liver suggested carcinoma, rather than sarcoma. If the disease was sarcomatous it must be conceded to have been primary in the spinal cord.

Dr. Frank C. Todd, of Minneapolis, read a paper entitled "The Place of Specialism in the Education of Undergraduates."

Dr. Parks Ritchie, of St. Paul, in commenting upon Dr. Todd's paper, acknowledged the need of concentration in the medical studies, and the desirability of reducing compulsory work, particularly in the special branches.

Dr. F. A. Dunsmoor, of Minneapolis, emphasized the wonderful development which clinical teaching and laboratory instruction had undergone. Medical colleges were educating men, usually of sixteen years previous training, and yet with the pursuit of half a dozen studies a day, there was danger of wearing the student out.

Dr. R. E. Cutts, of Minneapolis, said that Dr. Todd's paper was a most timely one and hit the nail squarely on the head. It must be admitted that the medical curriculum needs improvement. Laboratory and operative work is, for the most part, efficient, but the teaching of practical diagnosis is not.

Dr. H. A. Tomlinson, of St. Peter, insisted that the special branches should be relegated, for the most part, to post-graduate courses. If the undergraduate is well grounded in the physiology and pathology of his subject, applications of these sciences to practice may be made for the most part and most successfully after graduation. Every new graduate who had served in the state hospital under his superintendence had proved the necessity of learning anew the clinical conditions of disease. The relations of function, physiologic and pathologic, need to be more thoroughly taught and studied. Those men who have had a thorough general training in these fundamental branches, deal best with nervous disease.

Among the specialties to be cut off, he would begin with neurology and psychiatry.

Dr. R. O. Beard, of Minneapolis, said that Dr. Todd's excellent paper was a discussion of two subjects, the method and the matter of medical teaching. In method, great progress had been already made. That progress, which had modified instruction, would resolve it rapidly into laboratory and clinical lectures, illustrated by practical demonstrations. These should be quite distinct from laboratory exercises and clinics. The latter must be conducted with smaller sections of the classes, upon a basis of more individual instruction. This meant, of necessity, a larger number of instructors—a recognized inevitable in every progressive school. The recitation method might be a success or a failure, according as it constituted a review of the work of these lectures, exercises and clinics, or as it consisted merely in an ill-digested repetition of some single text. The former conception of it was correct, and, so followed, was a means of fixing the important features of a study in the mind of the pupil. The latter conception was narrow, and had a contracting tendency in the mind of the student. The round-table or seminaire method, in preparation for which authorities were collaborated upon any chosen theme, was a very different thing and was a valuable discipline in literary research.

As to the matter of medical teaching, education is in a transition stage. In the immediate past it had put a premium upon specialism in practice. The specialists had held on to the compulsory relations of teacher and pupils as a means of establishing a clientele for the future, and they had regarded the possibilities of that clientele as one of the emoluments of their service. That idea must pass. The required studies, especially in the specialties, must be diminished. Election is in the interest of both pupil and teacher. The chosen study is always a matter of greater enthusiasm to both than the compulsory one. The several courses must be concentrated and dimnished in simultaneous number. Dr. W. J. Mayo had recently and aptly remarked that the medical education of to-day was a progressive vaudeville. Concentration had so far met with the approval of teachers and students alike, and its application to the entire four years of medical study was sure to follow.

Dr. Parks Ritchie protested against the idea that students who graduate from present courses are not fit to practice medicine or to make a diagnosis. Special courses should be boiled down and compulsory work diminished, and this can be done by the grace and good will of the specialists.

Dr. Tomlinson corrected the impression that he wished to exclude the specialists entirely from undergraduate education. He insisted upon the material diminution of their teaching and upon a greater emphasis being put upon general medicine and especially upon physiology and pathology.

Dr. Haldor Sneve, of St. Paul, said that it was the function of the medical college to educate the practitioner of medicine. The student demanded enough knowledge to enter practice, but his higher education began when he graduated.

He favored a minimum of specialism. He cited the few fundamental facts with reference to the eye which his own professor of ophthalmology had held to be necessary for the general practitioner. He endorsed the pleas of Dr. Beard and Dr. Cutts for better methods of teaching. He regarded the bedside as the place for clinical study. He deprecated the recitation system, but approved the idea of round-table research.

Dr. F. C. Todd, in closing the discussion, said that he was glad of the interest which his paper had excited. He had wanted to learn from the opinions of others. The system of electives he believed desirable under certain limitations. The first three years of medical education are now practically devoted to the kind of groundwork which Dr. Tomlinson had advocated. The recitation method should be used only in conjunction with other methods. There is room for a concentration of courses. A great advance has been made in recent years and especially in the direction of a graded system. Further improvement may be made along the lines set by academic schools.

Upon motion, the Academy adjourned.

THE MINNEAPOLIS PATHOLOGICAL SOCIETY

Arthur T. Mann, M. D., Secretary

Regular meeting, Feb. 17, 1902, Dr. L. B. Wilson in the chair.

Dr. J. Clark Stewart presented an arm amputated for tuberculosis. Patient, a male, 27 years old, born in Jamaica. At the age of 4 years he fell, striking on his left arm; had a swelling near the wrist, resulting in abscess and passage of pieces of bone.

In December, 1900, an abscess near the elbow was opened and healed. In December, 1901, the patient went to Dr. Irwin with acute history, high temperature, swelling and pain over upper third of ulna. Diagnosis was made of acute osteomyelitis. Operated upon December 16, Dr. Irwin assisting Dr. Stewart. Incision through periosteum to ulna showed a greatly thickened and spongy periosteum, largely separated from the ulna by several drachms of pus. A drill passed into the medullary cavity of the ulna and found healthy marrow. The wound was tightly packed with iodoform gauze. Temperature did not drop afterwards, but for a week ran over 100° each day. February 8th, Dr. Stewart again saw patient at request of Dr. Irwin. At that time a large fluctuating swelling covered the whole outer aspect of the elbow-joint; temperature 99° in P. M. Operated upon February 10th. The old sinus was opened, and a total necrosis of the upper third of the ulna, except the olecranon, was found. The sequestrum was entirely separated, and there was a partial attempt to form an involucrum. On removing the sequestrum the joint was opened, and several ounces of seropus escaped from it. An incision was made exposing the joint, and extensive tuberculosis was found, involving especially the ulnar aspect of the joint, and extending into the soft parts above. On account of the ulnar loss, resection was deemed inexpedient, and the arm was amputated at the middle point.

The peculiarities of the case are the occurrence of complete necrosis of the ulna in its upper third from what appeared to be a tuberculosis process, and the very early complete separation of the sequestrum in seven weeks.

Dr. Abbott presented a Meckel's diverticulum, taken from a boy who had abdominal pain one year ago following a blow on the abdomen from a pitchfork handle. Patient grew into poor condition. There was a tumor the size of a hen's egg, to be felt at the right of the umbilicus, and under the right rectus. The mass was attached to the wall of the abdomen, and included the diverticulum and two loops of bowel, adherent.

Dr. Abbott also showed a tumor of the intestine, taken from a case of Dr. Dunn. Principal symptom was diarrhea, and the movements were most frequent at night. The tumor involved the bowel in its upper part. This specimen had not been worked up, and no definite diagnosis could be given.

Dr. White remarked that it was impossible to make out the relation of the tumor to the lumen of the bowel. The mass was adherent to the abdominal wall like a turtle-back tumor of the mesentery. The central portion seemed to extend through to the lumen of the bowel. The tumor was covered with fibrin and edematous material. Cultures showed a diplococcus and an unidentified bacillus.

Dr. Cutts spoke of a Meckel's diverticulum he had seen in a woman while operating for a uterine fibroid.

Dr. Cutts also reported the case of a child with a fecal sinus at the umbilicus and a bulging hernia whose surface was raw. The hernia proved to be a protruding Meckel's diverticulum.

Dr. H. L. Williams presented a chondro-mixo-osteo-sarcoma of the leg, operated upon by Dr. Dunsmoor by disarticulation at the hip.

The patient, male, was about 25 years old. Some two years ago a tumor was first noticed, involving the lower two-thirds of the femur and interfering with flexion at the knee. It was apparently of slow growth until the last few months, when growth was rapid. The thigh was greatly enlarged from the knee to the trochanter by a hard nodulated growth. General health good; pain in sciatic nerve due to pressure. Frozen section of a piece removed under local anesthetics showed chondro-sarcoma and determined an operation.

The tumor arises from the periosteum of the femur in its lower two-thirds, and completely surrounds the bone, which remains perfect within. It forms a mass irregularly four inches in diameter. The muscles are not involved, except the short head of the biceps and the subcrureus. Gross section shows a typical fibro-cartilagenous appearance, lobulated on section. No appearance in gross section to show sarcoma.

Microscopic sections show fibro-cartilage of irregular cellular growth.

Dr. Rothrock presented a specimen showing

ABSCESS OF CORPUS LUTEUM

Mrs. P., aged 23, was always well until August, 1897, when she had an operation for pyosalpinx on left side (drainage through vagina). Made a good recovery, and remained comparatively well until the summer of 1899, when she began to have pain on the right side, and to run down. She had in the following weeks repeated attacks of pain in the side, accompanied by fever. When examined in September a large inflammatory mass could be felt on the right side of the uterus, quite adherent to the wall of the pelvis. She had at that time a temperature of 101°, and a pulse of 114. Operation was advised, and laparotomy was made Sept. 20th, 1899. The diagnosis before the operation was pyosalpinx. On opening the abdomen a characteristic retort-shaped tumor occupied the right ovarian region, which after aspirating was easily enucleated. The tumor appeared to be a tubo-ovarian abscess. The patient made an uninterrupted recovery.

Description of tumor: Fallopian tube thickened and adherent to cystic tumor, but does not communicate with it. Tumor of ovary is 2½ inches in diameter, and shaped like a flattened elipse. On section the tumor is cystic with thick walls, and the contents is pus. The interior of the cyst is corrugated and the lining thrown in folds, with trabecula-like processes springing from the wall of the cyst, these being covered with a deciduous-looking membrane, which can be readily stripped off. This membrane has a yellowish appearance suggesting the lining of the corpus luteum. Microscopically this layer consists wholly of granulation tissue, very highly vascular, with no trace of lutein cells.

From the description of Orthmann (Verhandlemgen der Deutschen Gesellschaft fur Gynakologie, 1897) of abscess of the corpus luteum there is no doubt that this tumor is an illustration of that condition. Abscess of the corpus luteum is by no means so uncommon, for according to Orthmann, 21 out of 30 cases of ovarian abscess in Martin's Clinic were corpus luteum abscesses. In this case the primary condition was a suppurative salpingitis, and from this focus of infection, after the rupture of the mature follicle, the infection gained entrance to the blood-filled follicle, which furnished an admirable medium for the development of this condition.

ALCOHOL AS AN ANTIDOTE IN CARBOLIC-ACID POISONING

Alcohol will prevent and remove the caustic and poisonous effects of carbolic acid.

The primary step in poisoning is to wash the stomach out with alcohol; then whiskey may be given hypodermically with the idea of neutralizing the acid in the blood. Other heart-stimulants may be required. As the acid is quite rapidly taken up into the blood, it has been suggested that no treatment is complete without bleeding, but that has not been done to any great extent.

Alcohol is the most perfect, the most certain, and the most handy antidote to carbolic acid. G. W. Sargent (Therap. Gaz., Dec. 15, 1901).

BOOK NOTICES

A Manual of the Practice of Medicine. By George Roe Lockwood, M. D., Professor of Practice in the Woman's Medical College of the New York Infimary. Second Edition, Revised and Enlarged. Octavo volume of 847 pages, with 79 illustrations and 20 full-page plates. Cloth $4.00 net. Phildelphia and London: W. B. Saunders & Company.

If the reader of this work will bear in mind that he has before him a "manual" and not a "treatise" or "system," he will find great satisfaction in the use of the book. The classification of diseases follows the excellent plan laid down by Osler and each disease is considered briefly under the headings etiology and pathology, while the symptoms and treatment are gone into more fully. This makes just the kind of book to be taken up in the course of actual practice where all that is wanted is to refresh the memory about the main features of a disease so as to be prepared with answers to the innumerable questions that are sure to be asked at the bedside, some of them demanding a knowledge of detail that the practitioner does not always have just at his tongue's end. The only important criticism of the general way in which the book is written is that there is perhaps not enough said about differential diagnosis. This is particularly important as regards the exanthematous fevers where diagnosis is important and often difficult.

Wm. Davis.

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M. D. Third Edition, Revised and Enlarged. 12mo, 329 pages. Cloth, $2.00. Philadelphia and London: W. B. Saunders & Company.

As a proof of the popularity and readability of this work it is only necessary to mention the fact that the former edition was exhausted in less than two years. The subject is treated in an exhaustive and thoroughly scientific manner, and some new matter has been added, particularly to the portion of the book dealing with treatment.

The author ventures to assert that in many cases it is a better deed to restore to an impotent man the power so precious to every individual, than to preserve a dangerously sick man from death, for in many cases death is preferable to impotence.

The subject is an interesting one to the general practitioner, for it is to him the impotent apply for relief. Such a book will do much in preventing the physician from making light of an embarrassing predicament into which many of his patients stumble, and will call his attention to the frequency with which these patients patronize the quack, who, first of all, frightens, then robs, and mistreats by unscientific methods and adverse suggestions. The book is well written, clean, and free from the common-place, disgusting description of sexual perverts.

The chapters on treatment embrace, "Psychical Treatment," "Removal of Morbid Influences," "Spermatorrhea," "Hygiene of Living," "Medicines," "Hydrotherapy," "Electricity," and "Local Measures," as well as a fine discussion on the regulation of the "Sexual Life," "Organotherapy" and "Hypnotism."

Libertinism and Marriage. By Dr Louis Jullien (Paris), Surgeon of Saint-Lazare Prison; Laureat of the Institute, of the Academy of Medicine, and of the Faculty of Medicine of Paris. Translated by R. B. Douglas. Pages v-169. Extra cloth, $1.00 net. Philadelphia: F. A. Davis Company.

If history is ever repeating itself, it is well for American physicians to take warning from Dr. Jullien, and therefore to read this small volume, which deals with a subject of great importance to human kind. Dr. Jullien is a man of superior attainments, and he handles this disagreeable subject in an admirable way, throwing a flood of light on the consequences of a sin only too common in all nations and circles.

Simon's Manual of Chemistry. A guide to lectures and laboratory work for beginners in chemistry, specially adapted for students of medicine, pharmacy and dentistry. By W. Simon, Ph. D., M. D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, in the Maryland College of Pharmacy, and in the Baltimore College of Dental Surgery. Seventh edition. Thoroughly revised and much enlarged. In one octave volume of 613 pages, with 66 engravings, one spectra plate and 8 colored plates representing 64 of the most important chemical reactions. Cloth, $3.00 net. Philadelphia: Lea Brothers & Co.

When a scientific work reaches its seventh edition, one may well look for real merit in it. Dr. Simon's manual has reached this goal and has reached it through positive merit. The revision of the work has enabled the author to add much valuable matter, and to improve the arrangement.

The work particularly meets the needs of physicians, and it seems to us is exceedingly valuable for the use of a physician who is dealing with the subject by himself, as many physicians must necessarily do. The author's style is admirable; and the arrangement, the typographical features, and especially the colored plates, of the work are highly commendable. The parts on Chemical Physics and Physiological Chemistry are a new and valuable addition to the work.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. W. A. Angell, of Canby, Minn., is now attending the Philadelphia Polyclinic.

The Minnesota Valley Medical Association will meet in Mankato, Tuesday, May 5.

Dr. G. E. Chamberlain, of Waterville, Minn., has decided to locate in Bismarck, N. D.

Dr. E. S. Strout, of Minneapolis, is slowly recovering from a long siege of typhoid fever.

Dr. E. L. Burke, who has been practicing at Fergus Falls for some time, has gone to Idaho to settle.

The Gaylord, Minn., Hospital will open early this month, under the management of Dr. D. N. Jones.

Dr. E. A. Pray, of Valley City, N. D., is at home from Philadelphia, where he has been attending clinics.

Dr. N. J. Shields, of Lidgerwood, N. D., is in Minneapolis doing special work in surgery at Asbury Hospital.

The hospital which Dr. O. S. Sherping is to erect at Fergus Falls, Minn., will have accommodations for twenty-five patients.

Dr. Murdock MacGregor, of Fessenden, N. D., is at home from the east where he has been studying, and visiting the hospitals.

Dr. McIntyre, of Mayville, and Dr. Grassic, of Buxton, N. D., who have been in Chicago together doing post-graduate work, are at home.

The marriage of Mrs. Jennie Lind Lewis-Evans, known in Fargo and Minneapolis, to Dr. S. T. Satterthwaite, is announced at Fargo.

Dr. E. P. Townsend, of Billings, Mont., has been appointed government physician at the Cheyenne Indian Agency at Lame Deer, Mont.

Dr. A. F. Longeway, of Great Falls, Montana, secretary of the county board of health, has resigned, and is succeeded by Dr. W. H. Gelsthorpe.

A country exchange notes as worthy of mention the fact that Dr. J. E. Merrell, of Amboy, Minn., has revived the custom of traveling on horse-back.

Dr. C. M. Shanley, of Lidgerwood, N. D., who has been doing post-graduate work in surgery in Asbury Hospital, of Minneapolis, has returned to Lidgerwood.

The examination of candidates for internes at Asbury Hospital, Minneapolis, for the ensuing year, will be held at the hospital at 7:30 p. m., the third Saturday of this month.

Dr. John M. Dunsmoor, of Los Angeles, California, will spend April and May in Minneapolis assisting his brother Dr. F. A. Dunsmoor, in the place of Dr. Law, now in Japan.

Dr. T. H. Parks, the oldest physician in Ilwaco, Washington, died last month of heart disease. Dr. Parks was a graduate, class of '60, of the College of Physicians and Surgeons of New York City.

Dr. J. Clark Stewart, of Minneapolis, is going to New York to do several weeks' work in the hospitals on general surgical lines, but he will give special attention during a part of his trip to orthopedic work .

Work on the new building for the Asbury Hospital, Minneapolis, will begin this month. The building will be 96x300 feet in size, and will cost about $200,000, making it the largest hospital building in the Northwest.

Dr. Joseph J. Fortier, of West Superior, Wis., died suddenly on March 16. Dr. Fortier was a graduate of the Ecole de Medicine et de Chirurgie, of Montreal, and was 62 years of age. He had practiced in West Superior about ten years.

At the next meeting of the Hennepin County Medical Society, to be held April 7, the following papers will be read: "Clinical Features, Diagnosis, and Treatment of Pneumonia," by Dr. L. A. Nippert; "Inflammation of the Pelvic Connective Tissue," by Dr. J. H. Rishmiller; "Ocular Expressions of Renal Diseases," by Dr. H. McI. Morton.

FOR SALE

The largest and most profitable Swedish Movement Institute in the Northwest is offered for sale, as the proprietor has other interests demanding his entire time. This institute has long been very profitable, and is now earning about $4,000 net a year. The opening is an unusually good one for a young physician. The price is moderate, and the terms can be arranged to suit the purchaser. Address "Institute," care of the Northwestern Lancet, Minneapolis.

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THE PELVIC FLOOR AND ITS INJURIES*

By William E. Ground, M. D.

Member of the Western Surgical and Gynecological Association; Etc.

WEST SUPERIOR, WIS.

Before reading my brief essay, I wish to be allowed the privilege of thanking the society most heartily for the invitation to read a paper before it. I consider I have been highly honored, and I hope my humble effort will not be altogether disappointing.

The subject to which I wish to call your attion this evening is not a new one by any means. It is a subject which involves very largely the health and happiness of the most important part of the human race,—the women. I refer to injuries sustained by the pelvic floor during parturition.

In the first place, what is the normal pelvic floor and what is its function?

For practical purposes it is safe to say that the human species is a composite, the result of evolutionary processes. The requirements of higher life have necessarily modified anatomical structures to meet the new demands thrown upon them. The pelvic floor of the human female is a marked example of this. The upright position has made necessary the entire reconstruction of the plane of muscles closing the outlet of the pelvis. This plane of muscles and fascia contains clefts, and the exit of the alimentary and genito-urinary canals. In those animals which habitually assume the horizontal position, all the muscular mechanism that is necessary, is to prevent the escape of the contents of these canals, except at voluntary intervals. To accomplish this certain circular muscles are thrown around the respective termini, and are called sphincters. The support of the abdominal viscera is maintained by the ventral abdominal wall. In the human subject it becomes necessary to specially modify the muscular mechanism of the pelvic outlet, so that, in addition to the sphincters, muscles of support must be supplied. We therefore then have in the highly differentiated pelvic floor of the human female, two distinct muscular layers, functionally and morphologically different. Those muscles having to do with sphincteric action are developed from the primitive sphincter cloaca, while those forming the pelvic diaphragm and originally the muscles of the caudal appendage, are developed from the primitive flexors and adductors of the caudal vertebræ. Those muscles (the levator ani) constituting the pelvic floor or diaphragm proper have been evolved originally from the flexors and extensors of the caudal end of the vertebral column. In the tailed animals it is the business of these muscles to move that appendage. When the upright position was assumed and tails were no longer required, these muscular structures were utilized to furnish support for the superimposed pelvic and abdominal viscera. Hence the modern pelvic floor.

In considering the myology of the pelvic diaphragm only those muscles that are actively concerned will be considered in detail. The superficial muscles, the sphincter ani, constrictor vaginæ, and transversus perinei, are only mentioned to be excluded from our discussion. The pelvic diaphragm is formed by a thin muscular sheet called as a whole the levator ani. It is composed of four paired muscles, the ischiococcygeus, the iliococcygeus, the pubococcygeus, and the puborectalis. This series of muscles take their origin from around the brim of the true pelvis, and are inserted into the sacrum, coccyx, and median tendinous raphe. The ischiococcygeus arises from the ischium, and is inserted into the lateral border of the lower part of the sacrum, and the upper part of the coccyx. The iliococcygeus takes its origin from the iliac portion of the obturator fascia, and is inserted into the lateral border of the lower part of the coccyx and median raphe. While these two paired muscles form a part of the sides of the pelvic floor, they cannot be said to form an important constituent element. To the pubococcygeus and the puborectalis is assigned this important function. The pubococcygeus arises from the back of the body of the pubic bone along an oblique line which extends from the lowest limit of the symphysis outwards to the obturator canal, and, to a limited extent, from the obturator facsia. From this origin the fibers pass back by the urethra, vagina, and rectum, and are inserted by a tendinous expansion upon the ventral surface of the lower part of the sacrum and coccyx. The puborectalis, or sphincter recti of Holl, "arises from the back of the lowest part of the symphysis under cover of the pubococcygeus, from the upper layer of the triangular ligament and from the pubes immediately below the symphysis. From this origin the fibers pass around the lower rectum, meeting with fibers from the opposite side to form a strong loop or girdle which slings the rectum and vagina up under the pubic bone." I wish to call particular attention to the fact that the fibers of this muscle pass not only around the rectum, but between the vagina and rectum. This is the muscle that receives the major part of the injury sustained during delivery. The process of evolution has radically changed this muscle, even more than its associates. While its influence upon the caudal vertebræ has diminished, its influence upon the rectum and vagina has increased. So much so has this been the case that Holl considers the puborectalis as the best developed of the muscles of the pelvic floor, whereas in the lower animals it is hardly discernible.

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*Read by invitation before the St. Louis County Medical Society at Duluth, March 13, 1902.

This muscle keeps the rectum and vagina pulled forward under the pubic bone, so that the anus occupies a position on a line from one tuber ischii to the other, and about half way between the tip of the coccyx and the symphysis pubis. This is the position when the puborectalis is intact, but when it is lacerated or has lost its tone, it allows the perineal body to recede; and the perineal flexure of the rectum and vagina is lost. The puborectalis forms a complete sling around the rectum and vagina, and by direct continuation of its fibers produces a sharp angulation of these canals about an inch from the skin surface.

The function of this muscular sheet is that of support, pure and simple. Take a young, healthy and well-developed female—one that has grown as nature intended that she should, who has not been stultified by the evil influence of the modern fashion plate—and we shall see the curves of beauty, as well as the utility of the human form divine. With the subject standing erect, we notice a marked curving forward of the vertebral column in the lumbar region. This tilts the pelvis so that the plane of the pelvic brim is almost perpendicular, the promontory of the sacrum being almost directly above the lower border of the symphysis. This allows the weight of the abdominal contents to strike on the anterior abdominal wall and the pubic bone. The intra-abdominal pressure is then deflected almost directly backward and downward, impinging against the coccyx and the pelvic floor. It will readily be seen that the force exerted by the downward pressure of the abdominal and pelvic viscera, is so deflected in each instance as to pass almost at right angles with the center of gravity, so that there is no direct pressure from above on the normal pelvic floor. On the other hand, destroy the anterior lumbar curve or impair the integrity of the pelvic floor, and the entire mechanism is changed. The plane of the pelvic inlet assumes a position more nearly horizontal, allowing the intra-abdominal forces to be exerted more nearly parallel to the line of gravity, i. e., directly upon the pelvic floor; or if the pelvic floor be injured, the force falls directly upon the vaginal orifice.

It is practically impossible, as things now exist, for a woman to be delivered at full term, without more or less injury to the pelvic floor. These injuries do not take place, as a rule, where they are plainly visible. The amount of damage done the pelvic floor, in no way corresponds to the amount of laceration of the vaginal mucous membrane or perineum proper. When we remember that the outlet of the birth canal, with a diameter of one to one and a half inches, is suddenly dilated until a ring of 10 to 12 inches in circumference is produced, it is not hard to understand why injury is inflicted.

The consequences of lacerations of the pelvic floor depends entirely upon the structures injured. If confined to the skin and external muscles, so far as support is concerned little harm will follow, but if the deeper tissues, including the levator ani muscle, are involved, we find loss of perineal flexure of the rectum and vagina, with recession of the vagina and anus from the public arch, and relaxation of the pudendal aperture, with prolapse of the vaginal walls, due to diminished contractile power. The immediate danger occasioned by tears of the skin and mucous membrane are chiefly those of infection, unless the rectal sphincters are included in the traumatism, when incontinence of feces and intestinal gases will be added.

The remote pathology of pelvic trauma depends upon the extent of injury received by the levator ani muscle and its fascia. Lacerations of that part of the levator ani known as the puborectalis may take place at any point along its course, and its condition may be ascertained by passing the finger along over it as it passes by the sides of the vagina. Note the amount of resistance offered when pressure is made on this muscle laterally and behind. I have observed many cases where the tonicity of the levator ani was so destroyed that little resistance was encountered until the ligaments and pelvic bones were reached. The lacerations may occur immediately under a tear in the vaginal mucous membrane, or at another point, or the musculature of the pelvic floor may be extensively lacerated, and the mucosa and skin remain intact. As a result we have interference with proper involution of the vagina, vaginal prolapse, derangement of function of defecation and micturition, malposition of the uterus and appendages, followed by dynamic disturbance of the influences of intra-abdominal pressure, supervention of reflex phenomena, and a state of general ill health instituted, due to visceral ptosis.

It has lately become the general practice of obstetricians to make some attempt at repairing rents found, immediately after delivery. This practice, while beneficial so far as preventing avenues for infection and perhaps adding to cosmetic effects is concerned, is not calculated to restore the integrity of the pelvic diaphragm. Such suturing is almost invariably limited to the skin or superficial structures. Very rarely is a careful search made for deep and damaging lacerations. The tissues are at this time so swollen, edematous, and distorted that it is very difficult to properly place the sutures. Certainly repair work attempted on a bed, without assistants, retractors, and a good light, is little more than a farce, so far as restoring functions is concerned. At best such operating simply restores the symmetry of the pudendal aperature, unless, however, the sphincter ani is torn, then immediate repair is imperative to prevent fecal incontinence.

On the whole, I believe better results will be obtained if superficial rents are sutured, and the general attempt at restoration left until involution has been fairly complete, say, in the fourth week. Women should then be examined with a view to ascertaining the extent of trauma to which the pelvic floor has been subjected. If the anus has receded, the angulation is obliterated or greatly diminished, the vulva gaping so that straining brings into view everted vaginal mucous membrane—such a patient should be subjected to a thorough colpoperineorrhaphy before she has been much on her feet.

With regard to methods of operating, I shall speak only in a general way, giving nothing especially new, but rather gathering together a few facts from many sources, and making a method of procedure that appears to me to be a step in the right direction.

Those plastiques having to do only with the skin and mucous membrane, as before stated, are absolutely worthless against the ill effects of perineal relaxation and pelvic herniation. Most of the operations practiced—such as Emmet, Tait, etc.—do little more than restore the symmetry of the pudendal aperature, because they do not take into consideration the direct union of the puborectalis muscle and fascia, without suture en masse. They simply take a tuck in the vaginal mucous membrane, which, for the time being, contracts the introitus. While it is true that in many of these operations denudation is extended well up into the sides of the vagina, they are weak, in that they leave in the center an intervening patch of undenuded mucous membrane, and suture up along the sulci, or the denudation is not extensive enough, or the sutures are inserted in too superficial a manner or from the skin surface of the perineum, and do not, without intervening tissue, bring together the two lateral halves of the pelvic floor.

Referring to the anatomical diagrams again, we see how the puborectalis passes along beside and behind the vagina, and how it swings the vagina and rectum forward, so that when traumatism occurs the integrity of this muscle is destroyed, and pelvic relaxation results. These points are undisputed anatomical facts. This being the case, it seems to me the proposition to get down to the conditions actually at fault should admit of no dispute. Now, there are only two operations proposed that actually deal with first principles, namely, the Harris operation, and the technique suggested and carried out by Goldspohn.

Harris in his operation, as you will remember, proposes to deal directly with the puborectalis at the point of laceration. An incision is made in the lateral walls of the vagina, and the puborectalis exposed, the point of laceration sought for, found, excised and sutured. The same may be done with the muscle on the other side. This of course shortens the muscle and pulls the rectovaginal structures forward under the pubis. He repairs lacerations of the perineum in the usual way. I have had little personal experience with this operation, but did I not have a method that yielded satisfactory results, I should give the Harris operation an extensive trial, because I believe it to be founded on right principles.

The operation I have been executing during the last three or four years is in principle that described by Goldspohn in 1897. Dr. Goldspohn splits the rectovaginal septum well up toward the cervix, raises the vaginal flap, and with buried continuous catgut sutures the levator ani and its fascia together between the rectum and vagina, disregarding the point where rupture occurred. This is practically what I have been doing, except that I excise the vaginal flap, and suture with interrupted silkworm-gut sutures, in addition to bringing the puborectalis and fascia together with catgut. My reason for excising the flap and using interrupted silkworm-gut sutures instead of buried catgut, is the greater certainty of a more perfect apposition of the two sides, and the security with which I can keep the parts in that position until good union has taken place.

The operation is simplicity itself, there being no complicated suturing, such as is described in most text-books. The study of the wonderful patterns that have been cut out on the female perineum is certainly amusing, if not instructive. How I have wrestled with the difficult problems of perineal patchwork, and the gyrations of this or that man's suture in the past, no one knows but myself.

I begin operating by making three points with a clip of the scissors. One on each labium at the posterior limit of the remnant of the hymen, and the other in the posterior vaginal wall well up over any vaginal prolapse that may exist, usually about 2½ to 3 inches from the plane of the hymen. I denude between these points and at least half way up on the sides of the vagina in the region of the puborectalis. I would like to say right here that the bleeding is usually very free, and many points require ligating with catgut, as neglect to do this, and to depend upon the regular suturing to control hemorrhage, nearly proved fatal in a case of mine last fall. As it was I had to remove all of my sutures, and catch up the bleeding vessel. The woman was then so weak that I had no time to re-introduce the sutures, as the important matter then in hand was the saving of her life, which was accomplished by free hypodermoclysis. In about a week I curetted the raw surfaces, and replaced sutures the same as before, and never got a better result in my life.

I begin suturing at the upper angle of the wound, placing silkworm-gut sutures deep and from the inside of the vagina, until the external border of the denudation is reached. Before tying these sutures I find and suture together the lateral halves of the puborectalis, with fine formalized pyoctanin catgut. I begin then from above, and tie the silkworm-gut sutures. Occasionally if there is considerable tension on the catgut produced by bringing the puborectalis together, I tie the silkworm-gut down to the point of catgut suture, before finally securing this suture. I then proceed to tie the remainder of the silkworm sutures. We then have only a slight wound exposed at the skin surface, which can be readily closed with a few superficial sutures.

This operation has given me admirable results, even in the worst forms of pelvic floor relaxation and aggravated prolapse of the rectovaginal wall. I have been very successful with old cases of procidentia.

The points are to denude freely, secure puborectalis, and suture from within the vagina, for suture on the skin surface of the perineum is of no avail in restoring integrity of the pelvic floor.

THE TIME TO OPERATE IN APPENDICITIS

By Christian Johnson, M. D.

WILLMAR, MINN.

Dr. Little's paper on "The Time to Operate in Appendicitis," with the discussions thereon by some of the leading surgeons of Minneapolis, read before the Hennepin County Medical Society, and published in the N. W. Lancet of March 1st, is of more than usual interest, and especially so to the general practitioner in the country.

For some years past the management of cases of appendicitis has been a difficult problem for the general practitioner out in the country towns and away from the expert surgeon and hospital facilities, to solve. For the last eight or ten years the idea has been generally entertained that to let a patient, with appendicitis, die without an operation at some stage of the disease, implied negligence on the part of the medical attendant.

On the other hand, we older physicians who have treated cases of so-called peritonitis, perityphlitis, and inflammation of the bowels before the pathology of appendicitis was generally understood, and before this class of diseases was considered within the domain of the surgeon, have been rather conservative in our views, and, on the whole, have been disinclined to give way to the surgeon in the treatment of these cases. Nor has the surgical treatment of appendicitis, except as practiced in great hospitals and by expert operators, been anything to brag off. Every physician who has been in practice twenty years has seen numbers of cases of severe appendicitis—cases that eventuated in circumscribed abscess, and that we now know were ulcerative, perforative, and possibly gangrenous cases—recover under medical treatment. And we have also seen of late years quite a number of such cases operated upon "as a last resort," and generally in vain.

Referring to my own state of mind I can truly say that for the last eight or ten years I have watched every case of appendicitis under my care with fear and trembling, absolutely uncertain whether to advise operation or not to do so. I have no statistics bearing on the treatment of appendicitis in my practice, but I can look back twenty years and see cases scattered all along my tracks, and some of them—severe ones—in my early years left an impression on my mind never to be forgotten. In those days we, of course, never thought of calling in the surgeon to operate as a last resort, but fought the battle as valiantly, and with hope to the last, as in any case of typhoid fever. And our efforts were often rewarded by success in apparently hopeless cases.

Dr. Ochsner's "Monogram on Appendicitis," published in the Medical Standard about a year ago, gave me the first glimmer of light as to final solution of the question when to operate and when not to operate in acute appendicitis. Dr. Little is entitled to the thanks of the profession of the Northwest for having taken up the question here so as to get this mooted and exceedingly important question settled for good.

Dr. Little, of course, deals with the question from the standpoint of the expert surgeon, with his patient in the hospital equipped for first-class surgery. A very different problem confronts the general practitioner when he sees his patient miles out in the country and, as a rule, well-advanced in the disease. It therefore becomes necessary for the general practitioner to take the general propositions laid down by the expert hospital surgeon, and modify them to suit the altered circumstances of the country practice.

Look now at the conclusions arrived at by Dr. Little and stated in Summary No. I:

"In the early hours of an attack, preferably the first twelve, insist on operating, and tell the patient the danger of delay."

Very well; undoubtedly correct so far as it goes. But the early operation is practically excluded from country practice, and limited to the environment of great hospitals. As a matter of fact not one case of appendicitis out of a hundred in country and village practice is seen by a physician during the first twelve hours of the disease. Appendicitis, unless the initiatory symptoms are very violent, is usually regarded as a spell of intestinal colic, and treated by the home colic remedy, usually some opiate nostrum. It is only when the latter fails to give relief that the doctor is sent for and that, as a rule, is not before the second day of the disease, and possibly later.

The main objection that I see to summary No. I is, however, that the language of Dr. Little leaves the necessity to operate at once in the early stage of the disease without, at the same time, emphasizing the necessity of having a skillful surgeon to make even the early operation reasonably safe. Dr. Ochsner goes into this part of the subject with great fullness, and his position is, I think, impregnable. He says, in substance, that "the death-rate after appendicitis operations in the hands of incompetent surgeons is absolutely frightful," and that unless a competent surgeon is at hand to do even the early operation the patient's chances of recovery are vastly better under non-operative treatment.

Why is the simple operation of removing the appendix so difficult of execution? (Excuse me for pretending to discuss things surgical. There are, however, young surgeons, and possibly old ones, that need this information, and as Dr. Little has not given it I take the liberty of doing so.) Is not the removal of the appendix on the cadaver, and even in the living person with the organ in the normal situation and without adhesions, a very simple affair? It is. Any man with fair surgical skill, and familiar with modern methods can do that safely. But when the appendix is in an inflamed state, even for a short time, the problem has changed—altogether changed. Now you have an infective agent in virulent activity in and about the organ you must handle and amputate.

Perhaps the infection has already penetrated the walls of the organ, and gained access to the general peritoneal cavity, or, may be, the organ is ulcerated, perforated, or gangrenous, and your manipulation may serve to distribute the infection. There may be recent or old adhesions to separate, or the organ may be tucked away in different directions, upwards under the cecum, to the left among the small intestines, or downwards to the bladder, ovaries and tubes. And you may be called upon to do extensive dissections among important organs in the peritoneal cavity. And, therefore, while the removal of the appendix is in some cases a very simple matter, in most cases of appendicitis it is apt to be a very difficult undertaking and should not be attempted by everybody.

I would, therefore, propose to amend Dr. Little's Summary No. I so as to read as follows:

"In the early hours of an attack, preferably the first twelve, insist on operating, provided a competent surgeon is to be had, and tell the patient that an early operation by a competent surgeon is practically safe, but that the non-operative treatment is safer in any event than operation at any time by a surgeon of doubtful ability."

Some years ago I studied the surgical aspect of this question with a view to operating. After I had mastered the subject I made up my mind that I had better leave it alone. I had become convinced that it was not so easy as the eloquent talk of some appendicitis operators would have us believe. But I believe that Summary No. I, as amended above, is a safe and conservative statement of this question.

Let me now say, in conclusion, that although acute appendicitis in the vast majority of cases must now and hereafter be considered as subject to non-operative, medical treatment only, we need not on that account despair, nor fold our hands and assume the attitude of a mere looker-on, nor tell the victim of a rebellous appendix that we are utterly incapable of rendering him any assistance. A brisk cathartic at the very start, before there is any danger of the rupture of the organ and before the closure of iliocecal valve, will abort and cure the vast majority of cases without further treatment. If not seen until decided local inflammatory symptoms are manifested, enemata will safely unload the colon and cecum, and, in the majority of cases, start drainage through the iliocecal valve with great relief of all the symptoms. Add to this now, if judged necessary, lavage of the stomach, feeding exclusively per rectum, hot poultices over the bowels, leeches, and, last but not least, the judicious use of morphia;—all of these simple and rational, if old-fashioned, symptomatic remedial measures used with sense and discretion will, as Ochsner has said, and experience has demonstrated, relieve and carry through the acute stage, almost all cases of appendicitis.

TWO CASES OF SARCOMA, WITH AMPUTATION OF THE EXTREMITIES*

By F. A. Dunsmoor, M. D.

Prof. of Operative and Clinical Surgery at the University of Minnesota; Surgeon in St. Mary's Hospital; Surgeon in the Northwestern and the Northern Pacific andthe Minn., St. Paul & S. St. M. Railroads, Gynecologist in the Asbury and City Hospitals; Etc.

MINNEAPOLIS

The two cases of sarcoma here presented, one of the upper and the other of the lower extremity, are of particular interest both from the fact that sarcomata in these regions are rather rarely met with, and because, when such cases have occurred, a recurrence of the growth after amputation has nearly always taken place.

Case I.

The first case was that of a woman whose history is as follows:

Mrs. D——, aged 65 years; father died at 72, of liver trouble; mother at 76, of fever. Two sisters of her mother died of a malignant growth, one at 74 of "sarcoma of the bowels," and one at 60 of "sarcoma of the temporal region."

The patient was always well until last April, when she noticed a swelling in the upper third of the left arm, with quivering sensation for a minute, followed by sharp shooting pains. A tumor, the size of an orange, was removed by Dr. Cotton, the local surgeon, at Prescott, Wis., last October and sent to Minneapolis, where it was examined by Drs. Cutts, Mann and Stewart, and pronounced a spindle-cell sarcoma.

There was a recurrence of the growth in December, gradually increasing in size, until at the time the patient consulted me, January 31st, it extended along the region of the triceps, and the upper half of the humerus. Inasmuch as the growth had already returned within a period of three months after removal, it was evident that recurrence would take place, unless the operation extended through the tissues which could in no wise be implicated in the growth, and it was therefore determined to remove the entire upper extremity, which was done Saturday morning, February 1st, at Asbury Hospital.

The first incision was made along the clavicle, the middle third of which was removed. The subclavian artery was ligated in two places in its third portion. Immediately after being severed the distal ligature was pulled off by the great retraction of the vessel, and again secured with some little difficulty. The subclavian vein was in three parts, instead of the usual single vessel of this location. The girdling incisions were now extended from the outer third of the clavicle, over the inner margin of the axilla, across its base to the interior angle of the scapula, and then connected by an incision starting from the same point over the middle of the spine of the scapula, down to the termination of the first incision. The pectoral muscles were cut outside the margin of the axilla, followed by a division of the cervical plexus, and the scapula was separated from the body. The wound was closed with interrupted sutures, and the cavity drained with a half-inch tube.

So far as known by me this is the second operation of the entire extremity in this vicinity, one exactly similar having been made by me about one year ago.

The patient made an uninterrupted recovery, and at the present writing shows no sign of a return of the malignant growth, although the case will be watched with anxiety for many months. On the whole the prognosis is thought to be extremely good, and no return is expected.

A careful pathological examination was made after the operation by Dr. H. L. Williams, whose report is as follows:

PATHOLOGICAL REPORT

Macroscopical examination.—The fresh specimen consists of the upper extremity, including the scapula and about one-half of the clavicle, and weighs ten and a half pounds. The arm is rounded and robust and evidently from a well-nourished person.

On examining the surface the scar from an old wound, which measures three inches in length, is found passing obliquely across the posterior border of the deltoid at about the junction of its lower and middle third. By palpation and manipulation a hard lump is found about the size of a small hen's egg on the inner surface of the upper arm about three inches below the head of the humerus and seemingly attached to the bone, while one or two smaller masses can be indistinctly felt, along the line of the triceps below.

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*Case I. was presented before the Hennepin County Medical Society, and Case II. before the Minnesota Academy of Medicine.

Careful dissection of the arm was made, with the following result:

A hard nodule, the size of a small hen's egg, pinkish-white in color, poorly supplied with blood vessels, is found growing from the fascia and intramuscular septum of the triceps muscle, and is situated just above the attachment of the middle head and the inner margin of that portion of the muscle going to form the long head.

Below the large nodule several smaller nodules were found, varying in size from a nutmeg to a split pea, and extending downward along the inner margin of the triceps fascia, nearly to the olecranon. A small nodule about the size of a pea, was found growing from the periosteum, at a point just above the attachment of the middle head. The other portions of the growth were in nowise connected with the humerus. Neither the muscular fibres of the triceps nor of adjacent muscles appeared to be infiltrated or involved in the extention of the growth.

Microscopical examination.—Sections were made from the large nodule, several of the smaller nodules, and the small growth from the periosteum, and also from various portions of the triceps muscle, for microscopical examination.

These were hardened in formalin, cut upon the freezing microtome, stained with hemotoxylin and eosin and mounted in Canada balsam. The microscopical appearances of all the sections from the nodular growths, were identical.

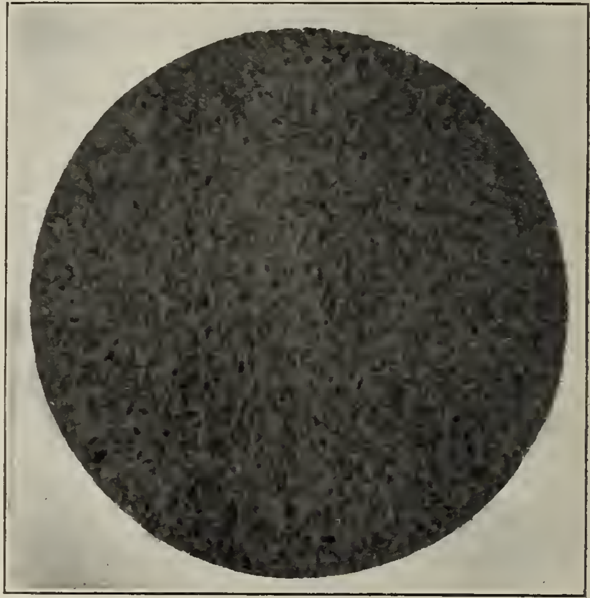
Examination shows homogeneous fields of spindle cells, closely packed together and separated by a small amount of intercellular substances (Plate I). The nuclei stain deeply and are somewhat granular. Blood-vessels are few in number, but where seen the wall is made up of but a single layer of cells, and oftentimes the wall of the vessel is apparently formed by the spindle cells of the tissue above referred to. The muscle substance of the triceps is not found to be infiltrated or involved.

Diagnosis: Spindle-cell sarcoma."

Case II.

The second case was that of a young man whose history is briefly as follows: Age 24; had diphtheria 12 years ago; was kicked in the stomach by a horse also at about this time, and was unable to work for two years. In the fall of 1900 he was kicked in the leg at the site of the tumor by another horse, but noticed nothing wrong with his leg except when he overstrained in running or when his leg hung over a chair in sitting. At these times it ached. Otherwise he was always well, and had unusual strength, until some six months previous to time of consultation, when he was taken with typhoid fever with relapse from which he finally made a good recovery. Before having the attack of typhoid fever he had noticed for many months a small growth behind the thigh, just above the popliteal space, which remained at the site where he had been kicked and which caused him no pain or discomfort. He could feel this lump on attempting to completely flex the leg on the thigh. This growth remained about the same until after the attack of typhoid fever, when the entire thigh began to become rather symmetrically enlarged in its lower

PLATE I.



Spindle-cell sarcoma, low power objective.

two-thirds, the swelling being particularly noticeable on the external and posterior surfaces. During the past few weeks pains have been occasionally felt in the thigh and have progressively increased in intensity. A clinical diagnosis of probable sarcoma was made, and it was determined to cut out a small piece of the growth for microscopical examination.

An incision was therefore made, under cocaine anesthesia, in the lower third of the thigh, just above the tendons of the outer hamstring, and a small portion of the growth removed with a pair of heavy blunt scissors, curved on the flat.

MICROSCOPICAL EXAMINATION

The report of this examination, made by Dr. H. L. Williams, pathologist to Asbury Hospital, follows:

"The specimen is a piece of tissue about half the size of a walnut, hard and elastic in feel, pinkish white in color, and rather avascular. Immediately upon removal it was placed in 10 per cent formalin, where it remained until the following morning. A frozen section was then made, and stained with hemotoxylin and eosin, and mounted in Canada balsam.

The specimens are entirely satisfactory. Large fields of embryonal cartilage are first noticed, with areas of well-developed normal cartilage, which contain numerous calcareous deposits. Between the cartilaginous tissues are a number of small areas of atypical connective-tissue cells, closely packed together, with darkly stained nuclei, irregular in size and outline, and with a very slight amount of intercellular substance. One or two small blood-vessels can be seen in these areas, with walls made up of but a single layer of cells, or replaced by the darkly stained irregular cells above referred to. A few fields are found containing a loose mesh-work of stellate cells with abundant intercellular substance.

Diagnosis: Ossifying chondro-myxo-sarcoma."

Amputation was performed at the hip-joint. The hemostasis was by the Wyeth method. The patient has made a good recovery, saving that a severe degree of neuritis required a reopening of the stump, and removing an inch of the stump of the sciatic nerve.

April 1st the crural nerve was divided and all below Poupart's ligament removed.

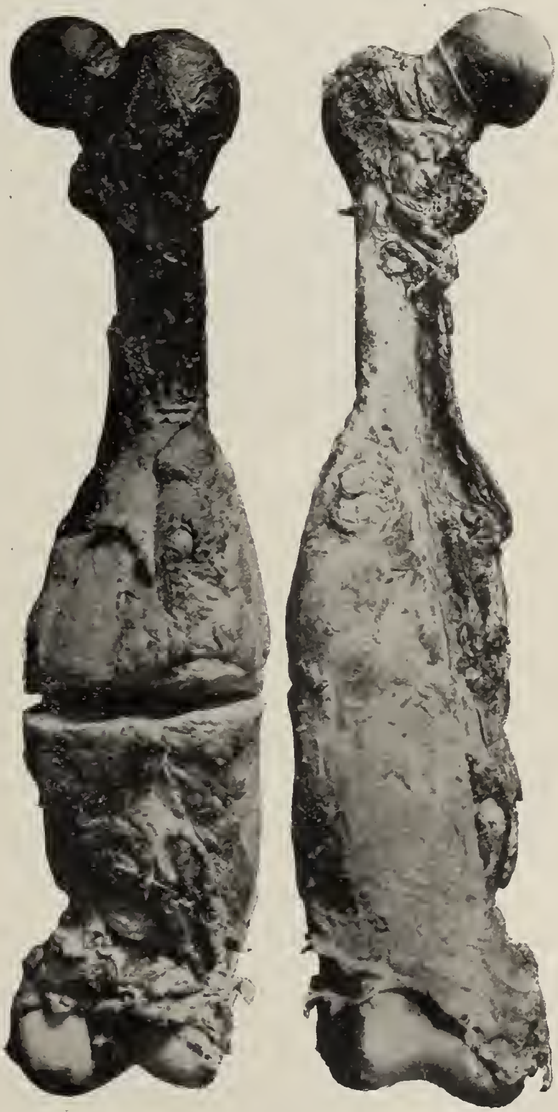
The following report of the microscopic examination of the tumor, together with the accompanying photomicrographs, was made by Dr. Williams.

"The specimen consists of the right lower extremity amputated at the hip-joint.

Beginning at the junction of the upper and middle thirds of the thigh, the limb is symmetrically enlarged and measures 23 in., 23½ and 22 in. at its upper, middle and lower thirds.

Upon careful dissection a symmetrical tumor, occupying the lower two-thirds of the limb, is found growing from the periosteum and com-

PLATE II.



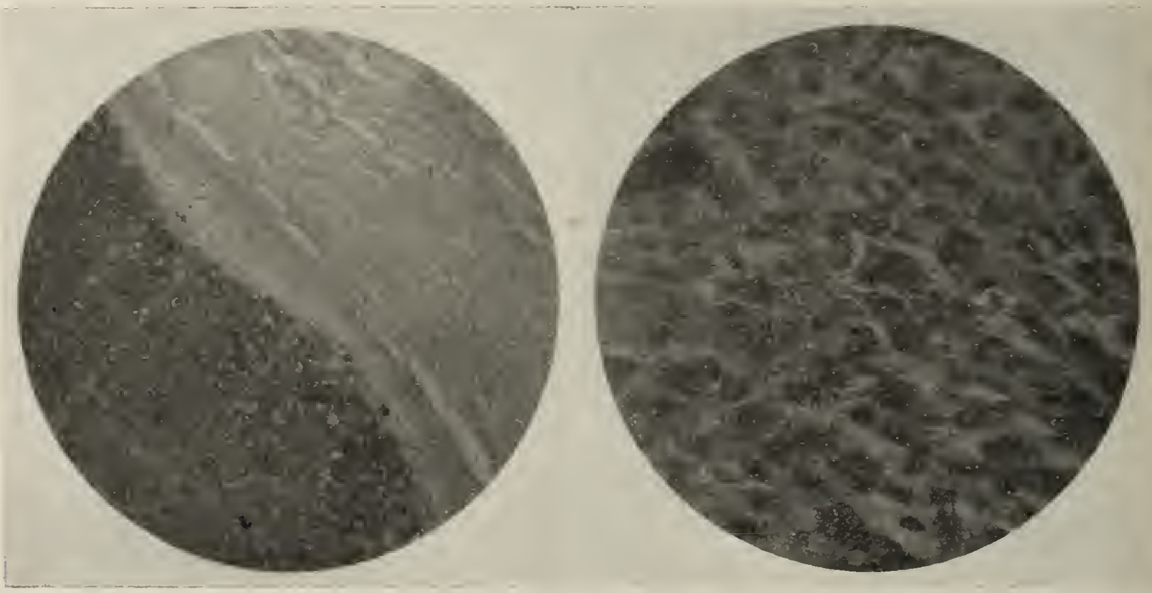
Anterior and posterior views of the femur, showing tumor of the periosteum, from which all muscles and normal tissue have been dissected away.

pletely encircling the femur. The shaft of the bone is apparently not affected, and the tumor can be separated and peeled off from the bone with the handle of the scalpel. (Plate II.)

The muscles of the thigh are not involved, and play freely over the tumor, and have been simply pushed out and lifted off from the bone as the growth has developed.

The tumor is distinctly encapsulated. The sciatic nerve runs superficial to the capsule, and is not involved in the growth. The femoral and popliteal vessels remain superficial to the capsule in a similar way. Sections for microscopical examination were made from several portions of the tumor and entirely confirm the original diagnosis." (Plate III.)

PLATE III.



Cartilaginous tissue, with capsule external.

Sarcomatous area, under high power.

THE NATHAN LEWIS HATFIELD PRIZE FOR ORIGINAL RESEARCH IN MEDICINE

The College of Physicians of Philadelphia announces through its committee that the sum of five hundred dollars will be awarded to the author of the best essay in competition for the above prize.

Subject: "The Relation between Chronic Suppurative Processes and Forms of Anemia."

Essays must be sumitted on or before March first, 1903. Each essay must be typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device, and containing the name and address of the author. No envelope will be opened except that which accompanies the successful essay.

The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

The treatment of the subject must, in accordance with the conditions of the Trust, embody original observations or researches or original deductions.

The competition shall be open to members of the medical profession and men of science in the United States.

The original of the successful essay shall become the property of the College of Physicians.

The trustees shall have full control of the publication of the memorial essay. It shall be published in the Transactions of the College, and also when expedient as a separate issue.

J. C. Wilson, M. D., Chairman,
College of Physicians,
219 South Thirteenth Street, Philadelphia, Pa.

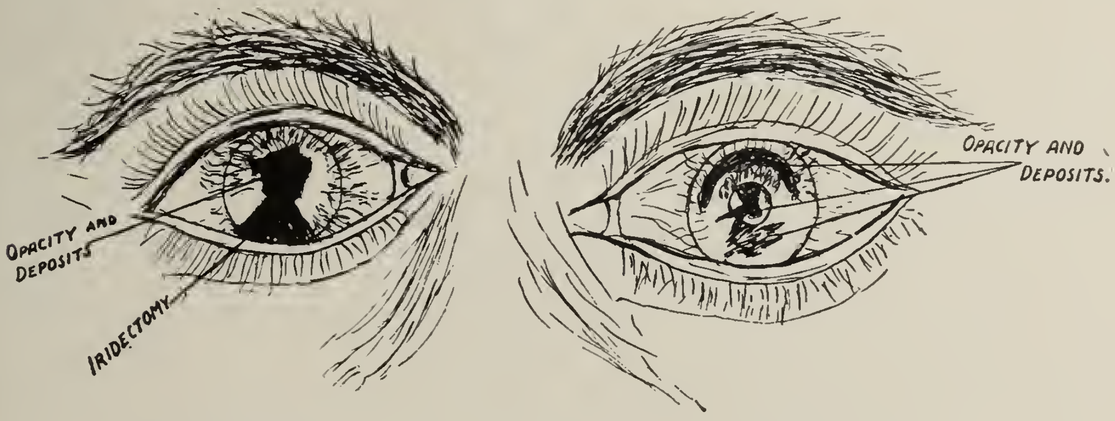
LEAD DEPOSITS IN THE CORNEÆ

By H. A. Beaudoux, M. D.

Oculist and Aurist, N. P. R. R.; Special Examiner for Pension Bureau; Consulting Oculist and Aurist to North Dakota Children's Home; etc.

FARGO, N. D.

October 15, 1896, Mary H—— was brought to me by her father for the removal of two dense, bluish-white deposits in the corneæ. After inquiring into the history of the case, I found that the young girl had been suffering for a long time from ulcers of the corneæ, which had been treated by the family physician, and subsequently at home with several patented lotions, one of them containing lead. The eyes presented a much inflamed appearance, besides large irregular superficial ulcers as seen in illustrations I. and II. An active pannus was also present, as well as all other well known symptoms which go hand in hand with the above conditions.



I Right Eye. II Left Eye.

Showing lead deposits and pannus before treatment, and iridectomy on right eye.

After the inflammation had subsided and the general condition of the eye improved so as to warrant interference with the dense opaque areas already referred to, I succeeded in removing, with the point of a Beer's knife, most of the opacity in the right eye.

From a former experience with a similar case, I expected to obtain quite a transparent medium in the eye, but Bowman's membrane was left very much toughened and lusterless, exhibiting a very gray color and hardly transparent. It is well known that the cells next to Bowman's membrane are most susceptible to the action of lead, which surrounds the nucleus by a metallic areola, the nucleus itself being left intact.

In the left eye the opacity, although not so dense, came off with great difficulty. The epithelium having grown over it was removed by scraping forcibly, and the bluish deposit was grossly removed only after a very tedious seance. All the epithelium was scraped off so as to give access to the deposit, and a solution of sodium acetate was diligently used for about six weeks, with a noticeable improvement in vision. Strange as it may seem, this salt, which had been deposited in the trough made by the loss of tissue in the corneal ulcers, was not thrown off, but was encapsulated, so to speak, by the epithelium, which had grown over it.

No improvement of sight was obtained in the right eye after the removal of the plaque, and because of the very thinned and weakened condition of the cornea underneath it, it was deemed best not to attempt to clear the medium with reagents, as I did later and so successfully in the left eye, but to make a downward iridectomy.

Little has been said in the literature in regard to these cases; and those who report them seem unable to ascertain from the nature of the deposit or by chemical analysis that the deposit was a lead salt, the amount being often too small for a chemical confirmation.

No attempt was made in the two cases I have met with to resort to chemical proofs other than by examination of the lotion and the inference resulting from the improvement following the sodium acetate solution. For the same reason Heckel, in his monogram upon his "Etudes sur les Tackes Metalliques de la Cornee," mentions the use of acetic acid as a dissolvent for the metallic infiltration, but because of the severe reaction which follows, it has been abandoned almost entirely.

The patient whose case I illustrate obtained enough sight from the medicinal and operative treatment to read medium-size print, and to write quite freely, which result must appear quite satisfying when we recall the patient's inability to go about alone, and also the apparently hopeless condition of her eyes prior to her admission for treatment.

ACUTE YELLOW ATROPHY OF THE LIVER

OR SO-CALLED ICTERUS GRAVIS, SOMETIMES CALLED PERNICIOUS OR MALIGNANT ICTERUS

By Oscar A. Fliesburg, Ph. G., M. D.

NORTH BRANCH, MINN.

Having seen, during the last two years, three cases of this rare disease, two of which were secondary to la grippe, and the third to a chronic catarrhal liver trouble, I deem it my duty to report these cases, and thereby add my mite to the knowledge and possible etiology of this obscure disease.

Case 1—C. O. A., aged 67, always of robust health, never sick. I was called to see him on Sept. 12, 1900, and found the patient suffering from la grippe and especially from severe pain over the liver region, of a colicky character, resembling the passages of gall-stones; a slight icteric tint of face and scleræ; urine dark; bowels constipated. I saw him again on the 14th, when there was much improvement, and with the aid of an enema procured a good movement of the bowels. I considered patient out of immediate danger, and so informed him. He improved that day and the following, up to 6 o'clock, p. m., when he suddenly sunk into a comatose condition, from which he could not be aroused. I was hurriedly called, and on my arrival I found him deep in coma, respiration being labored. Even in the deep coma he was suffering pain, with convulsive twitching of extremities; the skin had darkened very much, and the scleræ had become dark. He died at 2 o'clock the same night, not having regained consciousness. The whole ensemblage of the case was one of profound intoxication (toxemia).

Case II—P. J. L., aged 33, married. On Oct. 23rd I was called to see him, found him suffering from a fever, obscure, but in all its symptoms resembling a severe form of la grippe. Two days later, found him in about the same condition, only fever not so high, pulse rate slower, slight coloring of scleræ, deepening color of skin in general, tenderness over the hepatic region, dullness and tenderness over spleen, bronchial breathing over both lungs, tongue furred, urine dark and porter-like, stools few and tarry. October 27 there was some improvement in the general condition, fever low, all symptoms the same, but not so severe. Oct. 28, fever high, 105° F. Tongue coated brown, furred, chills and rigors, emesis, diarrhea, dark tarry stools, drowsiness bordering on coma, can be awakened only with difficulty, feels that the end is nearing. Became comatose in a few hours, feces and urine voided involuntarily, temperature high and rising up to 109° F., delirium and death at 11 o'clock p. m. Skin dark bronze, getting darker after death. Here was also the same picture of profound toxemia.

Case III—Mrs. A. P., aged 36, sextipara. Family history good. Previous history: She was operated upon by me in 1896 for chronic tubercular appendicitis. After-history good; no liver complication. Consulted me in September, 1901, for a mild hepatic catarrhal trouble. Saw me again in October, with no improvement of trouble. Consulted me again January 16th, this year. Thought herself possibly pregnant; examination negative as to pregnancy, but found uterus retroplaced; corrected displacement when some dark, tarry fluid escaped, as soon as uterus was put in place, no doubt retained menstrual fluid. While in the chair she became very faint for a few moments. In the evening of the same day she was taken with chills, vomiting, severe pains in legs, severe headache, and miserable feeling in general. I saw her again the next morning at 6 o'clock, and found her critically ill. The first look at her was something astonishing; her skin, which the day before had a normal color, was now dark brown; the day previous only the eyes showed a yellowish tinge; they were now dark bronze colored; her vomiting and diarrhea choleraic in character; incessant cramps and pains in legs, also in stomach. After administering the needed remedies I left her in about two hours quite comfortable. This condition continued all day until 5 p. m. At 4 o'clock, she herself dictated a message to me, with information that she felt quite comfortable; no vomiting, no diarrhea, no headache, no cramps. At 7:30 o'clock that evening her husband came after me in a great hurry, telling me his wife was delirious and could not be aroused; she could not speak or help herself at all. Realizing the danger I informed him that in all probability nothing could be done for her, but hastened to her bedside. On my arrival about 8:35 p. m., I found her deeply comatose; she had not voided any urine since the evening previous, and therefore I at once emptied the bladder, the contents of which were black as ink; thick and holding a sediment of disintegrated blood corpuscles. I gave her also a large hot rectal enema, which did not return. As a last measure I gave hypodermatics of strychnin, atropin, camphor and nitro-glycerin, but all to no avail. In three-fourths of an hour this young woman, the day before strong and seemingly in fair health, was a corpse. I found on my second visit of this day a great deal of respiratory disturbance, and her temperature, which in the morning was subnormal, rose constantly, until right after death it registered 110° F. There was a constant bloody exudation from the uterus, and the fecal discharges were full of blood; the gums were spongy, with little bloody oozing; the scleræ were dark brown; the color all over the body became nearly black, and two days after death was as dark as that of a full-blooded negro.

I never saw a more sudden picture of extreme toxemic poisoning, nor one that so powerfully impressed me with its fatality. I stood thunderstruck and speechless, and could not realize that the woman, who only yesterday in seemingly good health visited my office, could be the same person that now lay held in death's cruel and grasping embrace. Never have I in my twenty-one years of practice seen a case that so completely depicted to me the utter helplessness of our so much praised skill, and our so much vaunted knowledge, which we too often, both in and out of season, are apt to brag about.

I shall not go into any speculation about the cause or causes, especially the fatal "causa mordendi" of these cases, but shall leave that to abler men than I. However, in the first two cases I have reason to think the disease was due to the sudden infection and overpowering of the system by the influenza bacillus, disturbing the whole hematopoietic system. In the third case it was unquestionably due to retention of gall, and in the retained gall-fluid toxins or ptomains formed, suddenly poured out and overpowered the system, producing such a profound disturbance and toxemic condition that the bodily organism as a whole could not withstand its onslaught.

NORMAL SALT SOLUTION

Shakespeare, in his report to the United States government on Asiatic cholera, sums up the effect of salt solution on the system, which seems to cover all: (1) it supplies fluid to the anhydremic blood; (2) it makes good the loss of heat; (3) it dilutes the thickened tissue fluids; (4) it stimulates the kidneys to action; (5) it aids in the elimination of toxic matters circulating in the blood and exercising their baneful effects on the tissues, particularly on the nervous system.—Dr. G. A. Himmelsbach, Buffalo, N. Y.

NORTHWESTERN LANCET

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APRIL 15, 1902

MEDICAL SOCIETY DISCUSSIONS

Instruction and amusement are the usual reward for the regular attendant at medical society meetings.

The majority of papers contain more or less instructive material,—some of it new, some not so new, but clothed in the latest style of expression; and much of it is old, but good enough to bear frequent repetitions, and is therefore wholesome and interesting, and serves to recall old and perhaps forgotten impressions.

The amusing part of a meeting of medical men is the variability of the discussion, the unexpected comment on matters of minor importance, and the extensive excursions of thought far from the subject under consideration. Each man has his own impressions of a disease, a diagnosis and a treatment, and, if properly stimulated by the views of other speakers, feels called upon to record his ideas. In this manner the discussions are valuable, particularly if a speaker sticks to his topic, and gives his results gained from personal experience. He may have observed symptoms or physical signs that are new, or have not been given sufficient weight by the reader of the paper or the men who lead the discussion. He may record a method of treatment that has been of great value to him, thereby adding to general information. It is sometimes difficult to follow a reader, and the true meaning of some of his ideas is not fully grasped; perhaps he has already covered the ground, but has expressed himself in a general way, thinking the details are not of consequence, and will be understood or assumed by his confreres.

In the majority of instances the writers of papers have prepared their subject carefully, dwelling on etiology, symptoms, and pathology, with treatment considered from a broad standpoint. The result is that most of the men who follow, ignore the most important part of the paper, and confine themselves to the subject of treatment, believing that they are approaching the subject in the proper spirit and touching the vital point. Very naturally the treatment of disease should be given careful attention, yet how many are empowered to speak upon the question unless they are grounded in diagnosis.

It is so simple and easy to prescribe a remedy, but for what? Almost every physician has his so-called specifics that are used regardless of patient, conditions, or disease, yet his faith in them is unshaken until he is rudely awakened from his therapeutic dream by a discovery that diseases that have so fondly responded to his special drugs, recover without such specifics. Suddenly the idea occurs to him that it is the individual, and not the disease, that he must consider, that different individuals who suffer from the same diseases must be treated differently, and then the idea dawns upon him that the invalid recovers in spite of the disease and the uncertain remedies that have been so persistently forced into the system. All such experience, if thoughtfully applied, leads the careful man back to first principles, the recognition of the personal equation, the waiting and watchful diagnosis made by the best known methods, symptoms and signs, and finally the simplification of treatment. Papers, then, should be discussed, first, as to the history of the case, antecedent, etiological, and symptomatic; then from the standpoint of diagnosis, and, lastly, from the therapeutic side, giving due credit to each man's views, experience, and favorite remedies, keeping in mind constantly the well-known forces of nature and her remedies,—air, water, and cleanliness.

Add to this, if you please, a few, a very few, drugs that are well known in their effects. Cling to many of the old ideas, modify them by the experience of yourself and others, or change them entirely if a simpler or better agent presents itself.

The older practitioner keeps in a well-beaten path, the younger man endeavors to make a new one on account of its attractive surroundings; both lead to the same place in about the same time and in the same condition, yet each thinks his way the best.

In the end discussions are valuable, even though we do not approve ot the manner of expression or the view-point of others, and in our criticism may privately or publicly deny the value of the remarks of the previous speaker, and may, in our haste, call all men liars, because they do not incline to our way of looking at things.

One of the amusing features is the expansive, congratulatory, effusive, and explosive compliments that are, only too often, lightly and needlessly paid to the reader of a paper. It is well enough to thank the reader personally, but discuss his position and yours, clearly, concisely and coherently, then discussions are valuable and worthy of record.

CITY HOSPITAL HARMONY

The confusion and tumult which have embarrassed the officials of the Minneapolis City Hospital have subsided. Dr. Nelson is the superintendent, and is in full charge of the institution and the employees. This is as it should be in all large institutions, public or private. One man should be responsible for the management of the various departments, in order that he may surround himself with assistants who work in harmony with his views.

The unfortunate political influences that demand the employment of political favorites in municipal organizations should be combatted, if an institution is to be successfully maintained. Dr. Nelson has labored under many difficulties from various sources, and, in demanding his rights, has brought order out of apparent chaos; and he should be allowed to further demonstrate his views and abilities in hospital matters without bickerings and political interference.

An institution of such magnitude cannot be managed in a haphazard way without disastrous results. As soon as the superintendent demonstrates his efficiency, his term of service expires, and he is promptly dropped to make way for a new and perhaps untried or untrained man. It would be better if the hospital committee patterned after other cities in their endeavors to promote good management. The city of St. Paul has long recognized this important feature in keeping Dr. Ancker in his present position. Under his guidance the St. Paul City Hospital has grown in stability, and is looked upon as a model institution.

St. Paul has generously provided new buildings and modern equipment without needless delays. The city of Minneapolis has, year by year, interposed obstacles of all sorts, delayed the construction of needed buildings, and restricted the superintendents in every possible way. Other cities with one-half or one-third the population of Minneapolis have hospitals to which they point with pride, while we hang our heads in shame, and wait for the authorities to waken from their Rip Van Winkle sleep, and rouse themselves, and accomplish the work waiting for them.

The hospital for contagious diseases is still incomplete because some one is aggrieved or enjoys the discomfort of the sick who are crowded into a close, dirty and unsanitary hut.

How long will it be before medical men will follow the suggestions of expert medical advice in relation to the needs of the sick and suffering?

THE DOCTOR'S HEAVEN

We may live without poetry, music and art
('Tis a poet who says so), and live without heart.
We may live without lungs, stomach, liver or gall.
If the doctors just say so, we'll yield up our all.

We may live without stomachs,—who needs gastric juice?
We may do without galls,—who invented their use?
If we breathe through our skins—why need lungs or a liver?
And, this rubbish removed, we might live on forever.

To the hospital hasten, then, sufferers all—
They will fix you up right; if you're short, make you tall;
Add a leg or two; anything you desire,
And if all this don't work—you are free to expire.

—Blanche U. Radcliffe.

REPORTS OF SOCIETIES

THE MINNEAPOLIS PATHOLOGICAL SOCIETY

Arthur T. Mann, M. D., Secretary

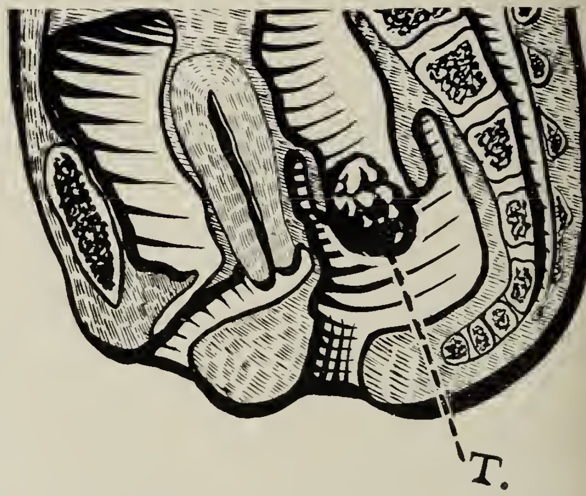
Regular meeting, March 17, 1902, Dr. L. B. Wilson in the chair.

Dr. A. W. Abbott presented a large intra-uterine myoma, 7x6 inches at the fundus, and the circumference at the cervix 9 inches. It illustrates the fact that intra-uterine myomata give a globular shape to the uterus. The tumor had been growing rapidly for two months, and was giving pressure symptoms in the pelvis. The broad ligament was spread out like an inverted fan on both sides of the uterus, and the vessels were enormous. The development of the tumor was in the anterior part of the uterus, quite uniform throughout the cevix as well as the body, interstitial but pushing toward the mucosa so that the canal lay stretched out behind the tumor, and only covered it by a thin layer of proper muscle tissue.

Dr. Abbott also presented the specimen of a carcinoma of the sigmoid which was found in an intussusception. He said that this must be an extremely rare condition as he had found no mention of it in any text-book. Yet it would seem to be remarkable that the condition carcinoma in intussusceptune, should be seldom met with when one considers that the circumstances are apparently extremely favorable for its production,—the freely movable sigmoid, the long loose mesosigmoid, the tumor attached to the inside of the bowel, all of which conditions would seem to be exactly favorable for an invagination.

The patient, Mrs. M——; aged 49; good health to Aug., 1901, then bleeding from the rectum; pain like labor pains, and tenesmus every hour for a day, and then a rest for two or three weeks. These attacks became more frequent, occurring every week for the last month, the last being a week ago. During each attack the bowels were constipated, and the abdomen distended. As the attack subsided "something seemed to go up." Has been passing more or less blood and mucus for the last six weeks.

A left colostomy incision was made, and the sigmoid found drawn intensely against the ilium. This was traced into the pelvis, the intussusception reduced and the bowel cut away with the contained tumor. The tumor was in the intussusception, and the intussuscipiens was the lower part of the sigmoid. The gut was sutured, and the patient is making a fair recovery. There will probably be a fecal fistula as the wall of the invaginated and invaginating bowel was thickly edematous, making it impossible to obtain a stable suture line.



Section of pelvis showing intussusception, with the tumor (T) dragging the bowel down.

Dr. R. E. Cutts presented a small hard fibromyoma of the ovary, very dense, the size of a small orange. Microscopic section of this tumor was also shown.

He also presented a uterus removed for pyometra. He had found the cervix closed and the uterine cavity filled with pus. The causes of this condition he said are usually carcinoma of the cervix or a closure of the cervix by a growing across in old age.

Dr. Abbott remarked that he had had quite a number of such cases and had succeeded in curing them without an hysterectomy. He stated that it is probably good treatment to do hysterectomy in selected cases. As to the cause of the condition old chronic endometritis together with the atresia of age causes the os to close and pus to collect behind it. Malignant disease is less often a cause.

Dr. Hunter spoke of one case which he had had and which had been cured afterwards by drainage; and of another case with so much polypoid growth about the os that it seemed to promise carcinoma, but the microscope did not show it. This case was dilated with cure following later.

Dr. J. L. Rothrock presented specimens from a syphilitic liver showing macroscopic and microscopic gummata.

Dr. L. B. Wilson presented a sarcoma of the cord in the lower dorsal portion, and showed the liver of the same case with foci of sarcomatous tissue, which were considered secondary to the primary growth in the cord. This specimen was sent to Dr. Wilson by Dr. Strickler of New Ulm.

Dr. S. M. White presented the main subject for the evening, the morphology of the malarial parasites, with demonstrations. He said in part:

The discovery of the role played by mosquitoes in the transmission of malaria, and coincidently, of the sexual phase of the life cycle of the malarial organism, which occurs within the body of the mosquito is the greatest advance within recent years, in our knowledge of this disease.

New staining methods, as Goldhorn's, Nocht's modification of Romanowski's method, etc., have permitted of great advances in our knowledge of the structure of these hemampœbæ.

Dr. White considered particularly the morphology of the organisms of tertian and estivo-autumnal malaria, with especial reference to the changes in the nucleus, and the occurrence of conjugation in the former. The nucleus in the earliest stage after segmentation, consists apparently of a mass of chromatin. Shortly after this, the chromatin mass becomes divided into smaller grains, but not until some pigment has developed in the body. At this time the "ring" form is well seen. The development of the organism through the ring and full grown forms, was considered step by step. In the presegmenting form we have a distributing nucleus, consisting of a number of groups of chromatin grains, each in a small unstained or "milky" zone. The pigment is beginning to move toward the centre and lies between the nuclear masses.

In the rosette stage, which, in the specimens shown, usually exhibited between 14 and 18 spores, the chromatin lies in a number of solid masses, somewhat flattened on two sides, each mass the nucleus of a forming "hyaline body" or "spore." Even at this stage the unstained milky zone and the stained young ring form may be foreshadowed.

The speaker reviewed Ewing's work on conjugation in the asexual cycle of the tertian parasite, and discussed its significance.

Stained specimens were exhibited showing the various stages of the tertian, and a number of the stages of the estivo-autumnal parasite.

Prof. W. S. Nickerson, at the request of the chairman, gave some remarks on the subject of mosquitoes.

He said that about 30 out of 230 known species of mosquitoes have been found in the United States. These belong to the five genera Anopheles, Culex, Megarhinus, Psorophora and Aedes, the first-named genus being the only one so far as known capable of serving as the host of the malarial parasite. The late Professor Lugger has reported the occurrence of this genus in Minnesota. The most of our mosquitoes belong in the genus Culex and have been found by experiment to digest malarial parasites received into their stomachs. They are therefore incapable of transmitting the disease. The other three genera are believed to be harmless, but have not been investigated.

The two genera, Culex and Anopheles, may be readily distinguished by differences in the palpi of the females (the males do not bite), and by the different positions in which the parts of the body are held to one another. Culex has short palpi, less than half as long as the proboscis, while in Anopheles the palpi are of nearly the same length as the proboscis. The abdomen of Culex forms quite a marked angle with the thorax and head giving the back a decided hump as seen in side view. In Anopheles the head, thorax and abdomen form a straight line whatever position the insect may assume. Several differences also between the larvæ of the two genera render them easily distinguishable. The larva of Culex has a large head and long respiratory siphon reaching to the surface of the water in which it lives. The anterior part of the body in the ordinary quiet state hangs downward at an angle of 30-45° with the surface of the water. The larva of Anopheles has a small head and inconspicuous siphon, and the body lies parallel with the surface of the water, the head when feeding being turned 180° so as to bring the mouth parts into the surface film of the water where the spores of the algæ on which it feeds are most abundant. Culex lays its eggs in compact raft-like masses on the surface of the water. The eggs of Anopheles are laid singly in the form of loose irregular chains.

BOOK NOTICES

General Medicine. Vol. I. of the Practical Medicine Series of Year Books. Edited by Frank Billings, M. D., Professor of Medicine, Rush Medical College, Chicago, with the Collaboration of S. C. Stanton, M. D. Pages, 275. Price, $1.50. Chicago: The Year Book Publishers.

This work is a resume of the literature of 1901. Its chapters are devoted to diseases of the respiratory organs, circulatory organs, general infectious diseases, constitutional diseases, such as rheumatic fever, miscellaneous joint affections, uric acid diathesis, diabetes mellitus, myelopathic albumosuria and osteomalacia. The last chapter is filled with interesting miscellaneous diseases.

The editor frequently expresses his personal views, which adds to the value of the work.

There are numerous condensed and summary paragraphs, which embrace the principal ideas of the various authorities, thus eliminating matter of little interest.

There are few errors, but the work is badly printed on very poor paper. Aside from this defect it is excellent.

It is to be hoped that the succeeding volumes announced by this house will improve in appearance.

The Standard Medical Directory of North America. Including a Directory of Practicing Physicians in the United States, Canada, Cuba, Mexico, and Central America. Also Directories of Medical Officers of the U. S. Army and Navy, Medical Societies, Medical Colleges, Medical Laws and Boards, Hospitals and Sanitariums, Mineral Springs, etc. 1,000 pages, 8x12 inches. Price, $10.00. Chicago: G. P. Engelhard & Co.

It is a vast undertaking to get out a medical directory, especially for the first time; and it is only fair to judge such a work by the promise of future usefulness contained in the plan. Judged by this standard, we believe Messrs. Engelhard & Co. are deserving of great credit for the work they have done on this first issue. The page of the directory is a pleasing one, and the size of it is that best adapted to a book of this kind. The general information the book contains is also useful.

Some mistakes will of course be found in the book, but, on the other hand, we note the correct addresses of physicians who have very recently changed their offices or locations, thus showing that the work is up to date.

On the whole this new directory is worthy of commendation, and its promise of future usefulness is very great.

Peru: History of Coca, "The Divine Plant" of the Incas, with an Introductory Account of the Incas and of the Andean Indians of to-day. By W. Golden Mortimer, M. D., Fellow of the N. Y. Academy of Medicine; Member of the American Museum of Natural History; Formerly Assistant to the New York Throat and Nose Hospital, Etc. With 178 illustrations. New York; J. H. Vail Company.

Here is a book of nearly 600 pages, on very heavy paper, with gilt top, devoted to a study of a single plant now extensively used in medicine, but giving a lot of interesting reading of an exceedingly interesting people. It is, in fact, a book of travel that becomes absorbingly interesting.

Dr. Mortimer seems to have the true German spirit of investigation, which goes after facts regardless of the cost of getting them—cost in time, effort and money. This enthusiasm is worthy of all praise, but sometimes it is misdirected. We cannot say that it has been in this case, inasmuch as the collateral information obtained makes his book a valuable contribution to our literature of history and travel.

Of course, he has treated the subject of coca very exhaustively, and he has incidentally shown how a very primitive people may obtain information of great scientific value. But few other drugs have had a similar history of obscure origin, and Dr. Mortimer may well be thanked for his valuable contribution to our sum of knowledge.

THE PULSE IN EARLY PULMONARY TUBERCULOSIS

In regard to the characteristic features of the pulse in early pulmonary tuberculosis, Dr. Edward F. Wells says: "A study of the pulse will afford some of the earliest indications of the existence of pulmonary tuberculosis. From the start, the characteristics of the pulse are changed from the normal. Usually the pulse is accelerated and the rate modified very little by position.

"The latter feature is very suggestive, and whenever the pulse is found to be practically the same whether the patient be lying, sitting, or standing, the most careful scrutiny is demanded."

MISCELLANY

AMERICAN ASSOCIATION OF UROLOGISTS

The American Association of Urologists was organized on February 22, 1902, essentially for the purpose of further development of the study of the urinary organs and their diseases. Although most of the founders of the association are specialists in genito-urinary diseases, membership is not limited to those engaged exclusively in this specialty. Thus gynecologists who embrace renal and vesical surgery in their work, are among the founders, as are also several gentlemen who devote themselves to the microscopy and chemistry of the urine, as well as a number of practitioners interested in the study of the kidney from a medical standpoint.

The association consists of active, corresponding, and honorary members, and is in great measure modelled upon the plan of the Societé Française d'Urologie, modified to suit American circumstances and conditions. Whenever possible, the branch associations throughout the United States, British possessions, and Spanish-America, will hold their meetings on the same evenings as does the parent association in New York (the first Wednesday in each month). The work of the associatoin is principally clinical, for the demonstration of new methods in the technique of examination and treatment.

The annual meeting of the American Association of Urologists will be held on the last day and the day following the annual meeting of the American Medical Association. The officers of the association are Ramón Guiteras, M. D., president; Wm. K. Otis, M. D., vice-president; John Van der Poel, M. D., treasurer; Fred. C. Valentine, M. D., secretary; A. D. Mabie, M. D., assistant secretary.

LOCATING THE LOCAL LESION OF PULMONARY TUBERCULOSIS

Before the Chicago Society of Internal Medicine, Dec. 22, 1898, Dr. Edward F. Wells read a very valuable paper on the value of iodid of potassium in locating the local lesion of pulmonary tuberculosis, as first suggested by Stricker. Its value is owing to the fact that when iodid is administered it is partly eliminated by the bronchial mucous membrane, increasing the bronchial mucus chiefly by the addition of water, thus causing the development of rales or the accentuation of those scarcely audible before. He says, "Generally speaking, it may be affirmed that in those cases in which tuberculosis is proven to exist, but with inability to locate the lesion, the locality and extent of the affected area may be made evident by the development of rales; that in cases with rales and an apparent inability to demonstrate the extent of the local involvement, the observer will be gratified with the clearness of the auscultatory evidence and astonished at the revealed extent of the deposit, and that in cases of suspected tuberculosis, rales and bacillary expectorate may be obtained earlier than is possible by any other means." In conclusion he says, "I believe that the iodid of potassium test as described is free from danger and serious objections; that it lends itself readily to the exigencies of routine practice; that in the early pulmonary tuberculosis and in defining the location and extent of the lesion, it is a useful addition to our diagnostic resources." The iodid should be given in doses of three grains three times a day for two or three days.

NORMAL SALT SOLUTION

A matter of great importance aside from the rapidity of its action, is the relatively small amounts that can be injected subcutaneously, which is followed by a very copious diuresis. Most writers now agree that the quantities formerly given in this manner, say from one to three pints, are entirely unnecessary, and that an equally specific effect can be produced upon the renal organs, causing them to pour out urine in amount many times greater than the quantity of fluid injected. This has its advantages over the other method, in that the time taken to do the operation is curtailed, which is of especial importance in a restless crying baby.

Lenhartz, *Deutsche Archives fur Klin. Med.*, advocates frequently repeated injections subcutaneously. From 2 to 6 ounces every three to four hours, have a better diuretic effect and cause less strain on the kidneys than a pint given several times daily.—Dr. G. A. Himmelsbach, Buffalo, N. Y.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. D. Nichols, of St. Louis, Mo., has located in Lesterville, S. D.

Dr. S. S. Reimstad, of Madelia, Minn., died suddenly last month.

Dr. C. E. Bachman, of Evansville, Minn., has located at Fingal, N. D.

Dr. S. S. Farmer, of Owatonna, Minn., has removed to Fertile, Minn.

Dr. Charles V. Templeton, of Woonsocket, S. D., was married last month.

Dr. Perry Nichols has removed from Sioux City, Iowa, to Watertown, S. D.

Dr. A. J. McCannell has removed from Lakota, N. D., to McHenry, N. D.

Dr. H. S. Plummer, of Rochester, Minn., has gone to Chicago for special study.

Dr. James A. Carter, of Rock Rapids, Iowa, has located in Church Ferry, N. D.

Drs. T. C. and A. G. Patterson, of Lisbon, N. D., have opened a hospital in that place.

Dr. G. P. Bearman, a graduate of McGill, Montreal, has located in Edmore, N. D.

Dr. F. J. King, of Hoople, N. D., has been doing post-graduate work in New York City.

Dr. D. Bell, a graduate of the Manitoba Medical College, has located in Edinburg, N. D.

Dr. George W. Potter, formerly of Ashton, S. D., is now located at Redfield, in the same state.

Lake Benton, Minn., is to have a hospital. It will be built for Miss Haaland, a trained nurse of that place.

Dr. Colin MacKenzie, of Watertown, S. D., has located in Minneapolis, with offices in the Masonic Temple.

Dr. H. E. Armstrong, of Billings, Montana, was married last month to Miss Mattie Chapple, of the same city.

Dr. Thomas Devereux, of Minneapolis, has purchased the practice of Dr. G. E. Chamberlain, of Waterville, Minn.

Dr. A. J. Moe, of LaCrosse, Wis., has moved to Heron Lake, Minn., and formed a partnership with Dr. F. R. Hansen.

Dr. R. S. Miles, who has practiced in Glencoe, McLeod county, Minn., for nearly 30 years, has removed to Excelsior, Minn.

Dr. John H. Crowe, of West Superior, Wis., has accepted the position of assistant surgeon in the Virginia Hospital, of Virginia, Minn.

It is reported that Dr. C. D. Harrington, who recently left Minneapolis, to locate at Cloquet, Minn., will build a fine hospital at that place.

Dr. C. H. Mayo and wife, of Rochester, Minn., have been spending some time in the South, mainly at New Orleans and Huntsville, Ala.

Dr. C. M. Parks, of Tacoma, Wash., has been appointed superintendent of the Western Washington Hospital for the Insane, at Steilacoom.

Dr. G. Oppliger, who has practiced for some years in Waconia, Minn., has moved to Minneapolis, and has offices at 806 Forty-fourth Ave. North.

Dr. H. H. Bingham, of the insane hospital staff, of Fergus Falls, has been appointed visiting physician of the contagious wards of the Minneapolis City Hospital.

The physicians of Clay county, Minn., have organized the Clay County Medical Association. Dr. L. W. Hyde, of Moorhead, was elected president, and Dr. O. E. Heimeck, of Hawley, was chosen secretary.

At the annual meeting of the Aberdeen District Medical Society, held at Aberdeen, S. D., in March, the following officers were elected for the current year: President, F. M. Crain, of Redfield; secretary, Dr. H. J. Rock, of Aberdeen.

The U. S. Senate committee on national quarantine, has made a report in which some details of the cases of leprosy in this country are given. Minnesota has the large number of twenty cases, out of a total of 271, which are found in twenty-one states.

The first notice of the building of a hospital or sanitarium by a homeopathic physician that has come to the attention of the Lancet, is that of a $20,000 sanitarium to be built in Anoka, Minn., by Dr. J. F. Kline, who is a graduate of the Homeopathic Dept. of the State University, Class of '93.

The May meeting of the Minnesota Valley Medical Society will be especially interesting. Dr. J. B. Welcome, Sr., of Sleepy Eye, will read a history of the early physicians of the Minnesota Valley, and as the doctor is taking great pains to get all available material, his paper will be of permanent value and interest.

The Cass County (N. D.) Medical Society elected the following officers at their annual meeting, held at Fargo, March 31: Pres., Dr. I. N. Wear; secretary, Dr. Elizabeth Rindlaub; treasurer, Dr. J. D. Henning. On the same evening the Clay County (Minn.) physicians organized a society at Moorhead, and hereafter the two societies will meet in affiliation.

NORTHWESTERN LANCET

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CLINICAL FEATURES, DIAGNOSIS AND TREATMENT OF PNEUMONIA, WITH DISCUSSION*

By L. A. Nippert, M. D.

MINNEAPOLIS

As the several seasons of the year bring forth in never-ending cycle their manifestations of development and decay due to atmospheric and telluric conditions favoring the one and hastening the other, they also, and in some measure influenced by these conditions, cultivate or sterilize the soil upon which thrives, according to our present knowledge, the cause of infectious diseases—the germ, be it bacillus or coccus.

As March has long been recognized as the month most favorable to the development of pneumonia, I thought a discussion of the clinical features, diagnosis and treatment of this disease to be timely. Not with the idea of presenting new thoughts or ideas, but from a desire to exchange individual observations assisting us in the diagnosis and treatment of pneumonia, I ask your indulgence this evening.

Case I.—George C——, American grain merchant, 48 years old, of good habits, had been what he called bilious for a few days. He had a slight headache; his appetite was not good as usual and a general feeling of malaise caused him some discomfort, but not sufficient to prevent his going to his office on Monday morning. While at his desk he was taken with a sudden, severe chill, immediately followed by a piercing pain in his right side below the shoulder-blade and profound prostration. Half an hour later, after his arrival at his home, he presented the appearance of a person suffering from surgical shock. Unable to lie down, he sat in a chair, his arms hanging over the sides, his anxious face of earthy pallor, his eyes glassy, the jaw dropping, frequent yawns being intercepted by contortions of his face from pain caused by jerky, abrupt inspirations. The temperature in the axilla indicated 103¼°; his pulse, soft, full, compressible, rose to 120; his respirations to 30 per minute; these with a slight tympanic note below the angle of the right scapula, and a fine friction sound over this area, were the only physical signs found. Some cough during the afternoon, delirium at night, grunting expiration, and on the following day expectoration of viscid, rusty sputa indicated the nature of the disease, confirmed by the rapidly developing physical signs of increased tactile fremitus, dullness on percussion, crepitant râles, tubular breathing and bronchophony, with marked bronchial whisper. A small quantity of albumen, but no casts, was found in the highly-colored urine. After a week's illness the disease terminated by crisis and perfect recovery.

This illustrates the typical clinical course of pneumonia, in which the general infection and local manifestations in the lung appear simultaneously and with equal severity. The condition resembling shock at the outset I have never had occasion to observe before.

Case II.—Mrs. M——, 30 years of age, American, went shopping on Saturday, December 7th. She did not wear her overshoes as usual, and felt chilly on her return home. On Sunday also she was uncomfortable and could not get warm. On Monday morning, although not feeling well, she went to the dentist's and had a tooth pulled after an injection of cocaine. That night she was taken with a severe chill, pain in the back of her neck and in the back, pounding headache, continuous vomiting of bile, and marked prostration. When first seen Wednesday morning her face showed a muddy yellow complexion, the conjunctivæ slightly jaundiced, the tongue heavily coated; temperature, 106°; pulse, 120, quick, small, and of very low tension; respiration, 22. The feeling of exhaustion and the exertions to vomit were the only causes of complaint. There was no pain, no shortness of breath, cough or expectoration. Physical examination was absolutely negative. Although the wound in the gum appeared perfectly healthy, a provisional diagnosis of sepsis was made which was not modified by finding a small quantity of albumen with a few granular and epithelial casts in the urine. For two days more, until Friday, these symptoms continued with a temperature ranging between 104° and 105°, when an acceleration of the respiration to 28, a slight cough, and especially the appearance of herpes labialis, aroused again the first suspicion of pneumonia. After a very careful examination a spot, not larger than a dollar, in the midscapular line and the eighth rib on the right side was found, which gave slight dullness and, on immediate auscultation, distant bronchial breathing and bronchophony. A gradual and complete solidification of the lower lobe followed with all its physical signs, but with absolutely no pain.

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*Read before the Hennepin County Medical Society, April 7, 1902.

This patient at the outset "behaved as if poisoned," as one writer aptly expresses it. Here the greater acceleration of respirations than we might expect from the height of the temperature and the appearance of herpes labialis, were two points of diagnostic value. The distant bronchial breathing was more readily discovered by direct auscultation than by the use of the stethoscope. Gastric symptoms, such as nausea, vomiting, and jaundice, are not uncommon in the first days, and may obscure the diagnosis while pain referred to the abdomen with some tenderness on pressure, is a feature of pneumonia in small children, which, it seems to me, is rather the rule than the exception.

Case III.—Tony F——, a sturdy little German boy, 4 years old, had a cold in his head for several days. He ate a liberal allowance of "crackerjack." In the evening he vomited, had fever and severe pain in the stomach. When first seen the following afternoon he presented a flushed face, active alæ nasi during inspiration, frequent respirations, coated tongue, temperature 103°, and on examination consolidation of lower lobe of left lung. The activity of the nostrils during respiration, especially in children, should arouse the suspicion of pulmonary complication, even if gastric symptoms appear to predominate.

In the young, brain symptoms resembling the onset of meningitis (I do not mean the cases of pneumonia complicated by inflammation of the meninges) at times entirely obscure the true nature of the disease. I regret that in reporting the following case I am compelled to rely on memory alone.

Case IV.—Bertha K——, a slender girl, 11 years of age, of good family history, was taken with a high fever and vomiting. After a day's illness it seemed as if reason and speech had left her. With eyes staring at the ceiling, she lay on her back and would not answer any question of her parents nor ask for anything. For at least five or six days not a sound passed her lips, although she seemed to notice when spoken to. There was some constipation, some retraction of the abdomen with hyperesthesia of the skin and restlessness at night; no cough for four or five days, and then but a slight hack; about that time a consolidation of the apex of the right lung was found. The disease terminated a few days later with a critical sweat and perfect recovery. This case is of more than passing interest as she had a second attack a few years later in which the cerebral symptoms were again so pronounced and pulmonary signs so totally absent at first, that, notwithstanding the previous experience, the diagnosis of probable meningitis was given, until finally the consolidation of the lung, followed by speedy recovery, dispelled all doubts.

Convulsions, dilated or contracted pupils, retracted abdomen with tenderness of the skin, headache, drowsiness and vomiting are symptoms so common in acute brain affections that cases of pneumonia presenting them are known as "cerebral pneumonia." This misnomer has at least the advantage of impressing one's mind so that in cases of probable meningitis the consideration of a possible pneumonia may not be omitted.

Contrary to the usually active and pronounced symptoms and signs in childhood and adolescence the pneumonia of old age is a disease of so sneaking and deadly a character that I believe it is safe to say that during the cold season the cause of sudden death in the aged is more likely to be pneumonia than heart-disease.

CASE V.—M. K——, an old settler of the East Side, a German, 72 years of age, had been "under the weather" for a few days. Contrary to his wishes, he was seen at 11 a. m. He sat in his bed, dressed and propped up by pillows. An extremely weak and irregular pulse, not explained by any cardiac lesions, was found to be due to a consolidation of the lower lobe of one lung. To the great astonishment of the family an unfavorable prognosis was given, which, unfortunately, was verified on the evening of the same day. A feeling of weakness expressed by the term "under the weather" was the only complaint he had made.

CASE VI.—Mrs. O——, a thin, small, silver-haired woman of 63, had pneumonia for six weeks. For ten days she seemed daily at the point of death, but finally recovered. Two years later, after a few days' malaise, she attempted to go down town, but after walking a few blocks she became very tired, and returned home. During her comments on her daughter's alarm and useless calling of a physician, an abrupt and somewhat accelerated inspiration was noticed; temperature, 100°; pulse, 128; lower lobe of right lung solid; recovery in ten days. Possibly she was nearer death's door when walking in the street than she had been two years before when apparently moribund.

There may be no symptoms in old people except a feeling of exhaustion, and no sign except a rapid weak pulse; hence the term "latent pneumonia."

Insidious and fatal as in the aged is the pneumonia potatorum, often concealed beneath the symptoms of acute alcoholism. The great depression of the vitality of the drunkard is unfavorable to a speedy and full development of characteristic symptoms and signs. The active hallucinations and muttering delirium are regarded as manifestations of delirium tremens alone; and unless examined with great care, which is often quite difficult in these unfortunates, the cause of death is overlooked. Cases of delirium tremens, with elevation of temperature, acceleration of respiration, and much prostration, demand a thorough exploration of the thoracic organs.

The surgeon does not forget that pneumonia may follow a simple contusion of the chest, or that, soon after operation, especially after laparotomy, germs gaining access into the peritoneal cavity and also the aspiration of germ-laden mucus into the smaller bronchi during anesthesia, may cause it.

Although of equal interest, time does not permit the discussion of tubercular pneumonia nor the secondary pneumonia so often found to complicate acute infectious diseases, such as influenza, typhoid, erysipelas or measles, or as the frequent cause of the exitus lethalis of chronic wasting diseases, like diabetes, Bright's disease, carcinoma or morphinism and valvular disease of the heart.

DIAGNOSIS

Usually the symptoms and signs of lobar pneumonia are sufficiently distinctive and pronounced to permit a ready diagnosis, yet the discovery of a "latent pneumonia" on the postmortem table is not uncommon, and chiefly for the reason that, like pericarditis, the disease has not been suspected. It is evident that such failures are more apt to occur in patients suffering from other diseases in which the primary condition overshadows the secondary developments.

Strict injunction to the nurse, both in medical and surgical cases, to count and record the respirations as carefully as the pulse and temperature, will, by revealing a disproportionate acceleration of the respiration, often arouse this necessary suspicion.

The anxious, inquiring look, the mahogany flush of the cheek, and the activity of the alæ nasi just before inspiration are further evidences of beginning pulmonary complications, but are not of as much diagnostic import as the expiratory grunt and the appearance of herpes labialis.

If expectoration be present the sputum, at first tenacious and yellow, soon shows the characteristic rusty color. Small clumps of casts from the bronchioles may be found. The microscope reveals the diplococcus or bacillus pneumoniæ.

During the short first stage, that of hyperemia and of relaxation of the air-vesicles, inspection will show a shallow rapid respiration with some restriction of motion of the affected side, which to the touch may seem warmer than the other corresponding region. The percussion note over the area, which later consolidates, is somewhat tympanic. Friction sound and the fine crepitant râles may be heard on deep inspiration, but not until the exudation has reached an appreciable extent are the characteristic physical signs of pneumonia developed.

Lying on the affected side or on his back, the lines of the fever-flushed face depict apprehension, pain and respiratory distress to such a degree that the term "facies pneumoniæ" has been used to express this condition.

Palpation imparts an increased vocal fremitus, often so distinct that the boundary of the solidified lobe can be outlined by the finger tips while the patient counts "one, two, three," yet sometimes entirely absent in case the conducting medium, the air within the bronchi, has been cut off by compression or obstruction. After coughing, tactile fremitus, which could not be detected before, may be restored.

Percussion gives an increasing dullness as the disease advances, however, it is not usually so profound as in pleuritic effusion, nor does the finger acting as pleximeter notice the firm, board-like resistance as in the latter disease. The percussion outlines usually follow the division of the lobes, and are not so irregular or so changing with position as in pleurisy. The non-affected portion of the lobe or the adjoining lobes gives a vesiculo-tympanic resonance, due to compensatory empyema, a note which, if circumscribed, should always arouse suspicion of mischief in another part of the lung.

Auscultation reveals tubular or bronchial breathing, high-pitched and metallic. The voice is transmitted as if it came from the surface of the consolidated area. The whispered voice is heard clear as from a speaking-tube. Often, and particularly in children, the bronchial respiration is detected more readily by immediate ausculation, while the stethoscope is necessary in exploration of the axillary and supraclavicular regions.

The heart sounds are transmitted with great distinctness in pneumonia of the left side. The pulmonary second sound is sharp and loud in consequence of the increased pressure in the pulmonary artery.

Palpation and percussion of the abdominal organs may show a moderate enlargement of the liver, rarely of the spleen, from passive congestion.

The diseases which are to be considered in making the differential diagnosis of pneumonia, after the appearance of physical signs, are abscess of the liver, malignant growth of lung or liver, pulmonary infarct, acute tuberculosis infection, and, most important, pleuritic effusions, serous or purulent.

Careful attention to the history, with absence of the distinctive features of pneumonic infection, is sufficient to exclude abscess of the liver and malignant growth.

The presence of valvular disease of the heart or of thrombosis of larger veins, the sudden dyspnea, bloody, not viscid expectoration, the absence of fever, and of other symptoms of infection, and the circumscribed area of consolidation are evidences of pulmonary infarct.

The differentiation from acute tuberculosis infection is frequently difficult, sometimes impossible. A very careful history of the patient and his family will guide us in the right direction. The discovery of bacillus tuberculosis in the sputum is conclusive. Cases of "delayed resolution" should be regarded with suspicion of being tubercular.

With the history of the onset of pleurisy with effusion (I may state here that the tendency of the present time seems to be to search for one or two signs, considered positive, and rather neglect the more tedious but safer process of taking an exhaustive history in which an apparently trifling incident may elucidate an obscure case), we have the prominence of the affected side, frequently demonstrable by mensuration; sometimes obliteration, or even bulging of the intercostal spaces; the usual, though not constant, diminution or absence of tactile vocal fremitus; the increased resistance and total dullness on percussion with an irregular or changeable outline; the more distant, less metallic tubular breathing with the tremulous transmission of the voice, and less distinctness of the whisper.

Yet all these signs may so closely resemble those of pneumonia, and particularly in empyema following pneumonia, that the diagnosis could not be made positively were it not for the displacement of adjacent organs, as the heart and liver, or of encroachment upon the semilunar space of Traube in effusions of the left side, and the positive result of exploratory puncture. This operation may have to be repeated several times before its negative results can be accepted as conclusive.

TREATMENT

As yet we have not found ways and means to prevent access to the system of the germs causing pneumonia, but we may endeavor to fortify the resistance of the individual against their invasion.

At this season this resistance has been depressed by the enervating, moisture-laden south and east winds, by over-heated office and residence, by premature change to lighter underwear, and by the laying aside of the heavy overcoat, which is uncomfortable in the warming sun. The protection of the skin by systematic cold sponging and suitable woolen underwear, the better regulation of house and office temperatures, and the guarding against chilling by wearing reasonable outward protection are therefore especially advisable in the spring months. The rooms in which laparotomies are performed should be more scrupulously disinfected and cleansed than customary whenever an epidemic of pneumonia prevails. The sputum, the carrier of the germs, should be disinfected.

While the majority of patients afflicted will recover without treatment, and some will succumb in spite of the best care and skill obtainable, yet in a good proportion Nature's efforts to restore will fail if the patient's power of resistance is not husbanded or stimulated at the right time. To guide his patient through the dangerous course of the disease is the physician's duty. He adjusts the surroundings to the needs of the sick, assists the elimination of poisons by encouraging the secretions and excretions, regulates nutrition, prevents waste, stimulates the flagging heart, arouses the failing respirations, cheers the mind (a most powerful tonic), and watches and possibly forestalls approaching complications.

Pneumonia patients should be confined to the bed until after resolution has been completed. A well ventilated, light room should be selected. The atmosphere should be kept moist and warm, and the temperature not less than 68°. Careful attention to the diet is necessary to prevent fermentation and consequent bloating. Water, plain or carbonated, with fruit extracts or light wine, is to be allowed in liberal quantities. A mouth wash of borax and glycerine, borolyptol or listerine, and the relief of the dryness of the nose by instillation of liquid vaseline or sweet oil are greatly appreciated by the patient.

A laxative of calomel and podophyllin, followed by a saline, empties the bowels and assists in relieving the embarrassed respirations. Cream of tartar, a teaspoonful to a glass of water or lemonade, promotes intestinal activity and "flushes" the kidneys. In the later stages spirits of nitre, being more stimulating, is a better diuretic.

Frequent sponging with water, to which may be added salt, borax or saleratus, followed by an alcohol rub, cools and cleanses the skin. It also keeps the friends busy doing something.

No drug can claim the distinction of being a specific in pneumonia, yet the free administration of sodium salicylate has been followed by results which seem to justify its general use.

The carbonate of creosote and of guaiacol (8 grains every two hours) are excreted in part by the lungs, and may therefore have a direct influence on the seat of the disease.

Of late the subcutaneous use of solution of salt and bicarbonate of soda has been introduced, and satisfactory results have been obtained. Their use seems rational and effective after venesection for relief of engorged heart has been practiced.

Of the special symptoms calling for treatment, pain stands foremost. Caused by pleuritic engorgement and inflammation, counter-irritation by mustard or dry cup, the latter left for one-half hour, every four or six hours, and restriction of mobility of the affected side by bandage or strapping, may be sufficient to give relief.

In robust individuals an ice-bag to the affected side often brings great comfort, and has the advantage of aiding in the reduction of the temperature, usually high in this class of patients. It is well to cover the ice-bag with flannel, thereby relieving the disagreeable sensation of cold which the bare rubber imparts. Very severe pain demands anodynes. If Dover's powder or codeia have no effect the hypodermatic use of morphia must be resorted to. In few diseases the administration of opium or its derivatives demands greater circumspection than in pneumonia. The inhibitory effect of the drug upon the respiratory centers may cause serious results in patients whose lungs are congested or even edematous (Glanz). Combining it with atropia will in some measure reduce the dangerous tendency. After hepatization is complete no morphia should be given, except in cases of extreme necessity.

Cough is Nature's effort to remove secretions in bronchi and trachea, and unless persistent, harrassing or painful, should not be interfered with. Liberal doses of sodium bicarbonate in lemonade, citrate or nitrate of potassium to which may be added paregoric, heroin or codeia are of value in the first stage. Later the carbonate or chloride of ammonium with extract of valerian are preferable.

Great dyspnea, caused by pulmonary congestion and conquent distension of the right heart, will often yield to the withdrawal of from eight to twelve ounces of blood by venesection.

Fever is a natural consequence of the effects of infection in a system capable of reaction. Unless excessive and persistent, efforts to reduce it are apt to do more harm than good. The temperature in pneumonia is remittent, and seldom persists long enough to cause serious tissue changes. Tepid sponging, with ice to the head, or the administration of from four to five grains of acetanilid or phenacetin, combined with strychnine, caffein and quinine are sufficient measures to counteract the nervous irritability, also the headache and restlessness caused by high temperature. Restlessness, insomnia and delirium are controlled by bromides, chloral, or paraldehyde, sulphonal, trional, or hyoscine hydrobromate. In old people with a small area of consolidation, but much exhaustion, opium in the form of Dover's powder (8 grains) with lupulin (10 grains), the active principle of hops, frequently acts like a charm.

In the insomnia of exhaustion following the crisis, a cup of hot malted milk is a splendid hypnotic.

In all cases of the severe type the action of the heart needs stimulation by strychnia or digitalis, given in doses large enough to affect the pulse, but if symptoms of heart-failure should arise, prompt and decisive measures must be resorted to. Alcohol must be given in liberal quantities, and strychnia with digitalis should be administered hypodermically with no reference to dosage, but with close watch upon their physiological effect. If the symptoms are very urgent the use of diffusible stimulants, such as carbonate of ammonia by the mouth, and spts. of ammonia and the hypodermic use of camphor dissolved in olive oil, or even sulphuric ether, may turn the balance in favor of the patient. No person with pneumonia should be regarded as absolutely hopeless. Many a one supposedly in extremis passes the crisis and recovers.

Besides the dyspnea at the onset, as mentioned above, the involvement of several lobes may so decrease the respiratory area that the oxygenation of the blood becomes less and less, and the patient dies from apnea. In such cases the administration of oxygen for ten to fifteen minutes every two hours, or more often if necessary, is a method which will save where nothing else will.

Case VII.—Wm. B——, aged 33, bricklayer, had pneumonia of the left lower lobe. About the fifth day the lower lobe of the right lung became affected, and then the middle lobe. In the night of the seventh day his respirations became jerky, his face livid, bloody froth oozed from his mouth, and death was expected every moment, but the use of oxygen caused expectoration of large quantities of bloody serum. He began to breathe easier, and after free use of the oxygen for two days, given whenever his symptoms indicated it, he improved, and finally recovered.

After convalescence is established the patient still needs watchful care. He should be carefully protected from draughts, his diet cautiously increased, the visits and congratulations of friends deferred to a future period, and close attention paid to the pulse and the heart's action.

Case VIII.—Th. S——, aged 17, pasty complexion, flabby tissues, had pneumonia with temperature ranging between 104° and 106½°, and irregular and quick, soft pulse with muffled heart sounds. In spite of the high temperature there was but little flushing of the face, an indication which I have noticed in several cases to be of ill omen. Contrary to expectation and to the unfavorable prognosis given, he passed the crisis on the eighth day. On the following day his appetite returned; he slept, and felt, as he expressed it, "fine." He was not seen the next morning, but his father called in the afternoon, not to report continued improvement, but to ask for the death certificate. Disregarding the directions of enforcing rest, his mother had allowed him to sit up and dress. As he straightened out to pull up his trousers he fell back dead. As in diphtheria, a sudden and unexpected heart-failure may end a case almost well. Rest in bed for at least a week after convalescence should be insisted upon.

In protracted convalescence preparations of bark, hypophosphites, the syrup of iodide of iron, and cod-liver oil, assisted by a liberal diet, are the measures to be relied upon. The preparation known as Trommer's Extract of Malt with cod-liver oil and hypophosphites has been, in my hands, most serviceable, especially in children.

A change to a warmer, equable climate may be necessary for complete restoration to health, more so in those of tubercular predisposition.

SERUM TREATMENT

The writer has had no experience with the treatment which may, in the future, prove as specific in pneumonia as in diphtheria—the serum treatment. He has not been able to find a sufficient number of cases reported by a sufficient number of careful observers, which have given anything like positive or convincing results.

Although it has been stated that its use is not harmful in any quantity, or at any stage of the disease, men in position to use and observe the action of the serum state vaguely that it was employed with apparent benefit, gives better results than ordinary methods, that its results are, on the whole, not discouraging, and that practically it has not been demonstrated to be of great value. It is therefore difficult to share the enthusiasm of the writer who recommends its use, until results are obtained, whether it be by one or twenty bottles of the serum. As the same writer states that the effects become manifested in twenty-four to forty-eight hours, the administration of twenty bottles would consume a period of twenty to forty days, rather a long time, when we consider that the average duration of the acute process is about ten days. Let us not forget to be rational, even if we are enthusiastic.

As yet this treatment seems to be in the experimental stage, and cannot be commended to the general practitioner, or by him to his patients, as holding out prospects of better results than the ordinary methods.

CONCLUSIONS

1. Repeated and careful physical examination of patients suffering from ill-defined infection is imperative, and should not be neglected in diseases which are likely to be complicated by pneumonia.
2. The treatment should be chiefly hygienic, dietetic and sustaining.
3. Drugs should not be administered as a routine, but with a positive end in view, and then in doses sufficient to obtain the desired results, such as stimulation of the heart's action, and prevention of pulmonary congestion and asphyxia.
4. The use of normal salt solution and of oxygen are a life-saving addition to our therapeutic armamentarium.
5. The control of the disease by serum from immunized animals is as yet in the experimental stage.

Like appendicitis, the subject of pneumonia is a hackneyed theme, yet the fact that fifty-six out of 184 deaths in this city last month were caused by this disease seems to justify its further discussion, for *repetitio est mater sapentiae.*

DISCUSSION

Discussion reported by Dr. A. E. Benjamin, Secretary of the Hennepin County Medical Society.

Dr. J. W. Bell said:

"I feel greatly indebted to the essayist for his practical paper illustrating the various clinical phases of pneumonia.

"Pneumonia, in this city and vicinity, has gradually increased in frequency and severity since the epidemic of influenza in 1889, and at no time have we had a higher death-rate than during the past month.

"While we detect the disease more readily, we have made little or no progress in treatment, as indicated by our present high mortality. The diagnosis of pneumonia in young children and in the aged is far more difficult than in the adult, due largely to the more tardy appearance and ill-defined character of the physical signs at the extremes of life. Consequently the constitutional or systemic symptoms should be relied on for an early diagnosis rather than waiting for the long-deferred and often ill-defined physical signs indicative of lung consolidation.

"In the management of the disease I believe that much can be accomplished by judicious treatment. The disease is self-limited; the struggle a severe one; but fortunately of brief duration, as compared with some of the other infectious diseases, notably typhoid, hence an opportunity for intelligent therapy.

"It has been my custom to administer a mercurial purge at my first visit, and thereafter a mild morning saline throughout the course of the disease, with the view of aiding elimination and favoring digestion. The action of the skin is best promoted and temperature favorably modified by an occasional warm pack.

"Strychnine, given subcutaneously, is a valuable drug, beginning with small doses and gradually increasing the dose as indicated by cardiac weakness or asthenia. I also believe that alcohol and aromatic spirits of ammonia, judiciously administered toward the end of the disease, are valuable aids.

"I agree with the essayist as to the necessity for absolute rest during the course of the disease, as well as after."

Dr. Kelsey discussed the paper as follows:

"The paper just presented by Dr. Nippert very ably handles the subject of pneumonia, and contains many valuable facts on this important subject. I recently noticed in a report on pneumonia by Dr. Billings of Chicago, that 'the poultice is a thing of the past.' In view of the fact of the exposure of the patient, and the frequent disturbance, I am inclined to believe that in uncomplicated pneumonia, this view is correct.

"I was also interested in the report of 500 cases treated in the Pennsylvania Hospital during the last four years, made by Dr. G. W. Norris. He states the death-rate of females was 20 per cent, of males 30 per cent, and of known drunkards, 67 per cent. This shows that alcoholic drinks play an important part in the large death-rate in pneumonia. This is worthy of consideration, especially so long as we have no specified treatment for the disease. Any precaution calculated to lessen the liability of an attack, or reduce the death-rate in those having pneumonia, should receive our careful attention. I cannot endorse the recommendation of the use of whisky and brandy as a heart tonic. Some years ago I took part in a series of experiments with liquors upon sixteen different people, with amounts varying from small doses to complete intoxication. In no case was there an increase in the fullness of the heart's action, so I do not consider liquors a heart tonic."

Dr. W. A. Jones said that two or three cases of apparent serious nervous disease that had come under his observation turned out to be atypical pneumonia. In one the child had all the symptoms of a cerebrospinal meningitis,—high temperature, delirium, and pain in the head and back, and on movement of the extremities. These symptoms continued in apparently increasing severity until the third and fourth days, when the pneumonic focus was discovered, although repeated examinations of the chest had been made. In a few cases it is impossible to make an early diagnosis of pneumonia when preceded or masked by symptoms which point to a nervous disease.

Dr. Head expressed appreciation of the value of Dr. Nippert's paper to general practitioners. He said he had treated 35 cases in private practice, and had been mistaken in the diagnosis of two, in which cerebral symptoms were most prominent. Headache and delirium are apt to mislead one. These prominent symptoms cleared up later in the two cases mentioned. A second group of cases in which a mistake is apt to be made, is in children with symptoms of some severe abdominal lesion, such as appendicitis or diaphragmatic pleurisy, in which pain is referred to the abdomen. Consolidation appears later, and diagnosis is made sure. A third variety in which distinct signs of the disease are absent until the third or fourth day is that in which may be a pleurisy with effusion, or an empyema complicates the pneumonia. There is apt to be some doubt of the true nature of the disease when complicated with typhoid fever, or when it occurs in feeble persons. Empyema accompanying or following pneumonia is quite frequent. A simple puncture, draining off the fluid when it is due to pneumococcic infection, was all that was necssary. Streptococcic infection of the pleural cavity needs to be opened to prevent the cavity from filling up. This method is also necessary in tubercular infection. As regards treatment, he thought very little was required. At the end of the disease, stimulants might be necessary. He knew that strychnia and whiskey were used by some physicians early in the disease, but he had never adopted the plan. He thought a cotton jacket and simple remedies were sufficient.

Dr. Hunter continued the discussion by saying:

"Dr. Nippert has given us, as he always does, an instructive paper on a timely matter. As to the diagnosis, he emphasizes the fact that while there may be no new methods, our mistakes always arise from the insufficient application of the old. The doctor says the typanitic note at the level of the inflammation is due to a compensatory emphysema, as I understand him. Now, I have always had the idea that this rather striking sound was explained in this way: The moistened, congested lung loses its elasticity, and so its pulmonary quality; the physical conditions approach those of the abdomen—percussion over a large air cavity, and hence the tympanitic note.

"As to treatment of pneumonia, it seems to me in all seriousness that the doctor is unusually happy in reducing it to the simple terms he does, viz., bicarbonate of soda bath externally and cream of tartar internally. In the comparatively few cases I have seen I must say I have never been convinced that any drugs I have given have any marked effects, even in controlling symptoms, much less of stopping the infectious process. Some cases, or some patients, die promptly; others lie unconscious for days and get well. Our city, in its peculiar arrangement of schools of therapy at the city hospital, offers a tempting field for someone to work out an instructive lesson, inasmuch as an examination of the records of all the cases treated should show a comparison of the natural history of the disease, and the modifications, if any, due to active drug treatment under like conditions. We could then start understandingly. Confidence in the old line of treatment is not betokened by the swift running after the new. Serum therapy and guaiacol are both, I fear, equally delusive."

Dr. Dunsmoor said he recalled the early treatment given pneumonia by Dr. Goodrich. Carbonate of ammonia was given during the progress of the disease.

Dr. Phillips wished to add to Dr. Dunsmoor's treatment the use of hot poultices, as he deemed this a most important method of treatment. He did not use strychnia much. He believed in having two poultices, one extending round the chest, and another kept hot and steaming. He did not like the use of cotton, as it kept the patient moist. He thought it important to make the patient vomit occasionally.

Dr. Staples remarked that in several post mortems made in New York city, ulceration of the stomach was found. Carbonate of ammonia had been given during the disease, but the physicians were unable to say whether the condition was due to treatment or to the disease. He thought there was no question but that poultices were considered too much out of date. Hot, moist dressing is most grateful to the patient, and relieves pain. He agreed with Dr. Hunter in the summary of the paper read. Dr. Staples thought the total percentage of deaths is greater now than during the past forty years. Personally, he thought that bleeding is too much neglected, as it is a great relief and sometimes saves lives. Veratrum is also a good remedy.

Dr. Phillips, in answer to a question as regards the dose of carbonate of ammonia, said he gave one-half to one grain, with two ounces of brandy and two ounces of syrup of tolu.

Dr. Hance thought the remarks of the last two gentlemen correct. He had seen a great many cases in his practice, and thought calomel and veratrum important remedies. He did not believe in cold applications. He thought cold reduced the temperature, but often caused death of the patient. He recalled to mind the death of a friend last January, in New ork. The best physicians in the city were called. The patient had been kept in ice, but on the third day he was placed in his casket. As regards diagnosis and treatment, young men might need advice, but old men do not. He thought there was no progress without theory, as we must establish facts from them, but we should not lay aside facts for theory.

Dr. J. P. Barber said: "I desire to add a word to what has already been said in commendation of Dr. Nippert's most timely and excellent paper. The subject is a broad one and might be discussed profitably until morning, but I will only touch briefly upon one or two points. In the first place, I believe the death-rate from pneumonia is not nearly so high in this climate as it is in the eastern and middle states. I was brought to this conclusion some ten years ago when I was younger and far more enthusiastic in regard to specific medication of this disease than I am now. I thought I had found a specific for it, and for a year or two kept careful records of all the cases treated until I had about one hundred with a death-rate of only 5 per cent. I was about to publish the result when it occurred to me to try a few cases without the specific for comparison. With some scruples of conscience and many misgivings, for fear I would lose a large percentage of my pneumonia patients, I did so. The death-rate was just about the same as before, and I believe that 5 per cent of all cases is about the mortality rate in this climate, although text-books written in the east place it much higher.

"I do not believe in overdosing pneumonia patients with too many drugs. I think it is better to spare the stomach, and administer drugs only when there is some special indication for them. I do not believe any longer in any specific for this disease ;but I do believe in cold bathing. In my experience there is just as much benefit from properly administered baths in pneumonia as there is from cold bathing in typhoid fever. I do not use it as a routine measure in pneumonia, nor do I in typhoid fever. As a rule the graduated bath or moderately cold pack in pneumonia is the best. In children I have derived the greatest benefit from the cold wet-pack, consisting of four thicknesses of table linen wrung out of water at 60 degrees, and applied around the entire body, as recommended by Baruch."

Dr. Behrens said he had listened to a great many discussions on papers, and all seemed to be on the same plan. He thought the rate of mortality about the same as 20 or 30 years ago. He thought many attacks of pneumonia are of a rheumatic type, and wished to take a stand in favor of anti-rheumatic remedies. He wished some of the men would try these remedies, and felt sure they would obtain good results.

Dr. Weston said he agreed with Dr. Head in the manner of treatment in some of these cases. Alcohol and strychnia were of questionable importance. His observations, while city physician, led him to believe that the homeopaths had as good, if not better, results in the treatment of these cases than the regulars. Dr. Austin Flint used the expression 40 years ago "too much alcohol and strychnia given." The mortality rate for the last 100 years at the Mass. Gen. Hospital was about the same.

If the case was treated symptomatically, it made little difference if diagnosis was not made early. He had known cases of pneumonia resulting in empyema, which had been treated as typhoid fever for a month. It was important, if diagnosis was made early, that the patient be put to bed, taking extra work off the heart.

was about the same. He thought it checked the

Dr. Nippert, in closing, expressed his appreciation of the free and spirited discussion of his paper. He stated that he regarded the diagnosis of lobar pneumonia in children from rational symptoms alone, as mentioned by Dr. Bell, as very difficult. The change of the pulse-respiration ratio referred to by Dr. Barber was an important factor of beginning pulmonary complications. With Dr. Head, he appreciated the difficulty of the diagnosis of consolidation from empyema, particularly in children, in whom the latter condition may follow the former. He had seen several patients in his practice in whom a supposed unresolved pneumonia "pointed" and was relieved by incision and drainage.

He has never employed cold baths for reduction of temperature, but has found tepid sponging and local use of the ice-bag sufficient, the latter in robust patients. He agrees with Dr. Phillips that the old-fashioned flax-seed poultice has fallen into undeserved disuse. No one who has had one applied on his own person, will deny its quality of relieving pleuritic pain and discomfort.

For years he has had occasion to observe the stimulating effects of alcohol on a flagging heart, and is not willing to renounce its use because sphygmographic tracings fail to corroborate his observations. He stated that he has had no experience with veratrum, which he believes is much more apt to kill patients than are the cold applications. It depresses the heart from the start. He did not desire to have it understood, as one of the speakers expressed it, that his treatment was "tartaric acid within, and bicarbonate without." While a majority of patients would recover as well under this treatment as they would with the 30th dilution of aconite or pulsatilla, or the 10th of spongia tosta, yet in many a vigorous line of treatment is necessary to save life.

While not a drug enthusiast, Dr. Nippert said he did not desire to be classed as a nihilist in materia medica.

ANOMALOUS POSITION OF CECUM AND COLON FROM FAILURE OF ROTATION*

By W. L. Grant, M. D.

GRAND FORKS, N. D.

A young man of 22, living fifteen miles from Grafton, N. D., had been suffering for one week from complete obstruction of the bowels without vomiting. When, on the morning of January 10, 1902, the temperature and pulse began to rise, he was brought at once to the hospital here, and operated upon the same evening by Dr. J. E. Engstad, assisted by Dr. Countryman, of Grafton, myself administering the anesthetic. He went on the table in bad condition, with a pulse rate varying from 130 to 140.

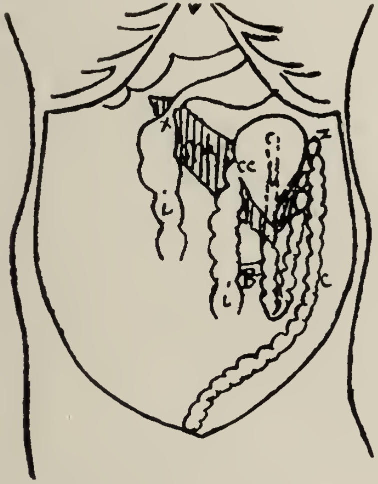

Fig. 1.—b—Murphy button; c—colon; cc—cecum; i—small intestine; m—mass; v—appendix; x—pressure points; z—secondary pressure points beyond which gas did not pass.

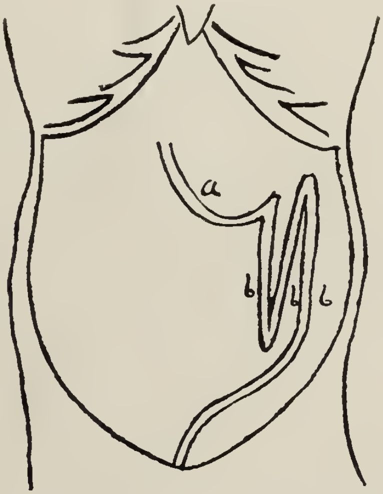

Fig. II.—a—attachment of mesentery; b—attachment of mesocolon.

The immense distention rendered operation extremely difficult, but the collapsed bowel was found and a Murphy button introduced between the nearest loop of the distended small intestine and what appeared to be the collapsed descending colon. After the button was in position, gas passed freely into the portion of bowel beyond the anastomosis. He did not rally after the operation, and death came at 4:45 the next morning.

At the post-morten examination the intestines were found slightly adherent to the operation wound, the liver normal, the gall-bladder distended to the size of a large egg, the stomach and upper part of the duodenum normal and empty, and the small intestine immensely distended, dark in color, and its coils adherent throughout.

When the right iliac fossa was exposed it was found empty, the peritoneum passing smoothly over the right side of the posterior abdominal wall from the pelvis to the diaphragm, there being no mesenteric attachments whatever, only the duodenum disappearing behind the peritoneum in normal position. This was loosened and drawn forward, and the small intestine traced downward, its mesenteric attachment (a. Fig. 2) being entirely on the left side.

The distention began at the entrance of the common bile-duct, and extended beyond the cecum. The colon, from the cecum to the flexure in the left hypochondriac region (marked z in the diagram, Fig. 1), was partially distended by gas, which had passed through the opening made by the Murphy button, while the descending colon, sigmoid, and rectum remained in complete collapse. There were three divisions representing the normal ascending, transverse, and descending colon, lying side by side in close proximity. This is fairly well shown in the drawing (Fig. 1), but they were crowded closer together, and the cecum pressed upon the flexure with sufficient force to close it against even the passage of gas. The anastomosis had not been made with the descending colon as was thought at the time of operation, but with what took the place of the normal ascending colon. Thus had the patient been possessed of sufficient vitality to withstand the prolonged shock, the obstruction would not have been relieved, and life would not have been prolonged. It can be readily seen how the anomalous position of the parts rendered the condition perplexing, and the operation difficult.

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*Published simultaneously in the Lancet and American Medicine.

The walls of the cecum were so thin that on slight traction being made to break up adhesions they tore through, allowing more than a quart of fluid to escape into the abdominal cavity. The ruptured organ measured 8x5 inches, and easily contained a quart. The omentum was small, nodular, dark-colored, and attached only to the anterior surface of the cecum. The appendix, 8 inches long, lay along the back of the cecum, directed downwards and imbedded in the mesocecum. It was normal and patent throughout.

The cause of the difficulty was an inflammatory, nodular and hemorrhagic mass of tubercular origin; in the mesentery, extending from behind the junction of the cecum and the colon upward, inward, and backward towards the foramen of Winslow, size 7x3x¾ inches. This produced pressure on the bowel at each end, the upper constriction accounting for the absence of vomiting, and the lower for the obstruction. The distention of the gall-bladder was also due to pressure on the duct at its entrance into the duodenum.

In the proceedings of the St. Louis Medical Society, published in the St. Louis Medical Review of Jan. 11, 1902, Dr. A. R. Kieffer reports a case of left-sided cecum. In commenting thereon Dr. V. P. Blair said: "In all vertebrates (above the sloth) there is a revolution of the cecum around the superior mesenteric artery by which the cecum moves from its place in the left iliac fossa over to the right. In man this goes farther, and by a change in the attachment of mesenteries the cecum becomes bound down in the right fossa, and the colon in its normal position.

"In the early stages of development there are no anterior parieties, and the intestines hang out from the future abdominal cavity, revolution occurring by the cecum traveling first cephalad, then dextrad across the lower end of the duodenum, and then caudad to the right iliac fossa. Morris suggests that this process might be interrupted at any stage, but no case is on record in man where the revolution has not taken place. The anomalies reported are in mesenteric attachments."

Left-sided cecum is extremely rare. Smith Moullin and Keith report one. Dr. Keiffer reports the one spoken of above. Byron Robinson reports one, and Henry Mudd has seen one at operation, as reported by Dr. Blair in the proceedings quoted from above. In this case we have not only a left-sided cecum, but a whole left-sided colon as well. The anomaly is not only in attachment of mesenterics (all the mesenterics being on the left side—Fig. 2), but in failure of rotation of the cecum. The cecum evidently became early attached, and as the colon developed in length it dropped towards the pelvis, forming a loop, the two limbs of which took the place of ascending and transverse colon in the normal development.

Thus the surmise of Morris that the process of rotation of the cecum might be interrupted at any stage, is proved true. The cecum has been found a number of times between the liver and its normal position, having failed to descend completely. Again it has been found in congenital umbilical herniæ, having failed to make the trip across the abdominal cavity. And, finally, in the case here reported the failure took place at the very beginning, no attempt having been made to pass from left to right, the cecum having been early bound down in almost its original position, the development of the gut in length going on upon each side as in a normal case.

In connection with the above case, a symptom worthy of notice was the total suppression of urine for 48 hours, the secretion being restored before operation.

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PNEUMONIA

The attention of the readers of this number of the Lancet is called to the paper on Pneumonia, read before the Hennepin County Medical Society, and the full discussion that followed the paper.

The paper is an able one, and covers the ground as thoroughly as possible for its length.

The discussion shows the different views of diagnosis and treatment entertained by the speakers. The general trend of the discussion was for advanced methods of diagnosis and treatment. The older and time-honored forms of treatment were championed by those who have been long in practice and who have been successful with their therapeutic measures.

On the whole, however, the discussion narrowed down to the advisability of treating pneumonia or letting it alone; whether it is possible to make an early diagnosis before physical signs appear or only when distinctive symptoms develop.

The discussion and the paper took up an entire evening, and demonstrated the necessity of expediting business, and restricting the time of discussion.

APOMORPHINE

When morphine is treated by acids and dehydrating substances, it loses one molecule of water, and the salt apomorphine is the result. When it is properly prepared it is slightly gray or greenish in color, and should be kept in the dark in well-stoppered bottles. It is soluble in 60 parts of water or 100 parts of glycerine, and in 50 parts of alcohol. It is incompatible with alkalies, iodides, ferric chloride, picric acid, tannic acid, and silver salts.

In cases of poisoning, which is an exceedingly rare accident with apomorphine, the antidotes are strychnia, chloral, and chloroform (Merck). The drug is exceedingly useful as an emetic when used hypodermically. In doses of 1-20 to 1-10 of a grain it will clear the stomach of its contents in a remarkably short time. It is an expectorant from its power to relax the tissues and to promote secretion, therefore it is valuable if added to mixtures which aim to increase the activity of the mucous membranes. As an hypnotic it is almost of equal efficacy with its mother salt, morphine, yet it is not so lasting as a depressant.

During the past few years it has established a permanent therapeutic place in the treatment of alcoholism, particularly in "plain drunks" or cases bordering on delirium tremens. In properly selected cases, those who are fairly robust, free from fatty or weak hearts, or who are not extremely debilitated, it relaxes, nauseates, or empties an overloaded stomach, increases secretions, and promptly promotes sleep. In other cases it is disappointing; it may cause emesis, but does not quiet the patient or produce sleep unless the first dose is followed by the usual mixture of bromides, chloral, and cannabis indica, repeated until sleep is secured.

It should not be used in cases where the circulation is feeble and the patient exhausted, for collapse and extreme depression may follow.

The drug is wonderfully gratifying in cases of simple or major hysteria: it relaxes the muscles, relieves opisthotonus, restlessness, and excitement, and the patient becomes supple, slightly nauseated, quiet and sleepy; the chaotic ideas disappear, the neurons resume their normal conductivity and stability, and the suggestion of a second dose to relieve a recurrence of the seizure is often enough to restore the stability of the nervous apparatus. This, of course, applies to the simple types of hysteria, uncomplicated by serious bodily disturbances.

Asthmatic attacks frequently subside after the initial dose, even though the paroxysms seem alarming. Dry coughs with insufficient bronchial secretion respond kindly to repeated small doses, alone or added to so-called expectorant mixtures.

THE MEDICAL PROFESSION AND MUNICIPAL POLITICS

An organization has recently been effected among the medical men of Dayton, Ohio, which embraces the various schools in a common brotherhood. The only requirement for admission is that the applicant shall be legally authorized to practice medicine. Uneducated persons who do not know the rudiments of medicine and who are unable to qualify before the State Board of Examiners are excluded. Thus the public as well as the club is protected. No adverse criticism can be offered as to the motives of the club, nor can it be called a medical trust, exclusive to its membership.

The benefits that will grow out of an organization of this kind are many. First, there is a recognition of certain qualified individuals to care for the sick and wounded; second, the right to devise and execute sanitary measures for public and private welfare; third, there is no recognition of "school" or "sect," but all are held to be equal and equally responsible; fourth, all medical men will work together in municipal and state legisation for the protection of the public health.

A club of this sort would be a power in a large city like Minneapolis, and, in a measure, it could dictate improvements that would be of lasting benefit. Its force might also be felt in the appointment of boards that are to supervise medical institutions for which the city is responsible. The club could go farther: it could select men who would be in harmony with its views on questions of sanitary comfort. Should representatives desire light upon the passage of certain municipo-medical laws, the club would furnish the required information.

If the public and the politician could once be convinced of the power of medical men who are banded together for the good of the people, and not for their own personal or professional advancement, there would be less friction between legislators and medical men; confidences would be exchanged, advice sought, and respect for the profession maintained. The people would soon learn that doctors are not the most selfish creatures in the state; that they are really interested in the advancement and administration of medical science, rather than in posing as champions of unjust measures, or prosecutors of illiteracy, quackery and charlatan methods.

On the other hand, if the doctors would thoroughly awaken to the fact that in organization there is a power that commands respect, they would soon be able to dominate and impress upon the law-maker or law-breaker the necessity of cooperation with a strong and helpful profession.

RESOLUTIONS OF RESPECT

The following resolutions were adopted at the meeting of the Crow River Valley Medical Society, held at Willmar, April 9, 1902.

Whereas, we have heard with sorrow of the death of Rollin E. Cutts;

Whereas, he has been connected with our society for the past three years; therefore be it

Resolved, that in the death of Dr. Rollin E. Cutts this society has lost one of its most faithful members, and we, his colleagues, a loved and valued friend.

Resolved, that we extend to his family our sincere sympathy in their sorrow.

Resolved, that these resolutions appear on the minutes of our society and that they be published in the Northwestern Lancet and the St. Paul Medical Journal.

HARRY MORRELL, M. D.
JAS. W. ROBERTSON, M. D.
Committee on Resolutions.

CORRESPONDENCE

"THE PELVIC FLOOR AND ITS INJURIES."

Minneapolis, April 26, 1902.

Editor Northwestern Lancet:

The paper by Dr. Wm. E. Ground on "The Pelvic Floor and Its Injuries," which he read before the St. Louis Medical Society at Duluth, March 13, 1902, and published in the Lancet, April 15, 1902, has attracted more than passing notice. The paper deals with an important subject, and is of especial interest to all doing obstetrical or gynecological work.

There is scarcely any part of the human anatomy of which the average physician has such an inexact knowledge as that of the female pelvic floor. The complex arrangement and action of the muscles of this region make it difficult to comprehend. Dr. Ground has described these muscles in a very lucid and satisfactory manner, and all who read the article will understand the construction of the pelvic floor better.

It frequently happens that, after a tedious and difficult labor, and the loss of much valuable time, there is a desire on the part of the accoucheur to get away to attend to other important work. The patient, on the other hand, is glad of a respite, and willing to be let alone. In this way, the subsequent examination is not carefully made, and many small, and some more important, tears are overlooked or neglected.

The immediate repair of the perineum is done daily by men who make no pretensions to surgery, and consequently are not able to do these operations very well. When there is not a fixed and proper idea in the mind of the operator as to how these tissues should be relatively, an incomplete or improper apposition of structures is made; and there are some tears, which, though stitched up correctly, may not have been done under aseptic precautions. These are some of the reasons why failures or poor results occur from an immediate operation.

In one paragraph Dr. Ground says, "On the whole, I believe better results will be obtained if superficial rents are sutured, and the general attempt at restoration left until involution has been fairly complete, say in the fourth week." This would be true under some circumstances, but if it is possible to recognize the tear at all, and the repair be made by a competent operator at the time, equally good results ought to follow as in a later operation. If the operation is done immediately, the muscles will not have retracted much; there is no cicatricial tissue to remove; the muscles have not atrophied, nor have the positions of all of the organs dependent upon the support of these muscles become materially changed. The patient will be able to get up and about (a universal desire of all women) as soon as possible after the lapse of the days allowed for an ordinary confinement.

I would suggest that every practitioner doing obstetrical work familiarize himself with the structures of the female pelvic floor, so that he may make a careful and painstaking examination in every case directly following labor, in order that any lacerated structures may be in most cases immediately repaired correctly by himself or by a special surgeon.

By employing these methods, those women who would not have a later operation, and nearly all others, will avoid the suffering caused by the lack of proper support of the pelvic organs. It will be unnecessary, in many cases, to dissect up the mucous membrane that has not been torn in order to repair a laceration of the fibers of some of the deeper muscles. If the sutures are introduced properly, by catching up the torn surfaces of the divided muscles, and tying them quite firmly, the mucosa will be puckered up, but the muscles beneath will be brought in apposition.

A. E. Benjamin, M. D.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

R. O. Beard, M. D., Secretary

Stated meeting, Wednesday evening, April 2, 1902, at the West Hotel, Minneapolis; the president, Dr. John T. Rogers in the chair.

The secretary announced the death of Dr. Rollin E. Cutts of the Academy's active membership.

Dr. C. M. Carlaw, of Minneapolis, presented the following report of an obscure case of cystic disease of the liver and kidneys.

Mrs. J. F. C. ——; aged 47; married; came under my care in October, 1894, complaining of abdominal pain of a mild degree; pain and a creeping sensation along the spine; nervousness and some digestive disturbance.

On examination a somewhat movable ovoid mass was felt occupying the right lumbar region and extending into the right hypochondrium and umbilical regions. On percussion there was dullness over the center; but a tympanic note between this dullness and that of the liver was present. On pressure, considerable pain of a sickening nature was caused. It was thought at this time to be a kidney growth, and an operation was advised, which was performed Oct. 31, 1894, by Drs. Little, Eitel and myself. An incision was made over the mass parallel with the long axis of the body. On opening the abdomen the peritoneum was found to be much thickened and brittle. On examination firm adhesions matting the structures firmly together were found in all directions. No kidney presented itself. We were very confident that the case was one of cancer, probably commencing at the hepatic flexure of the colon. Owing to the involvement of the parietal peritoneum and extension in all directions, it was considered unoperable, and no attempt was made to do anything with it.

In closing the abdomen the peritoneum was so retracted and inelastic that it could not be brought together. The muscles and skin were approximated in the usual way. Six weeks was the time limit set upon her life. She returned home Nov. 20th, much improved. The mass slowly resolved, and a year later the only evidence of the trouble was a comparatively small amount of thickening to be felt under the upper part of the incision scar.

It now became necessary to change our diagnosis, and for want of something better it was looked upon as tuberculosis. She enjoyed good health until early in 1900 when the mass began to grow slowly, and to give rise to more or less pain at varying intervals. Little worthy of note occurred until about Jan. 12th of this year, when she was taken with severe pain in the upper right abdomen and left shoulder; chills at varying intervals; irregular, often high temperature (105° F.). Liver was at this time enlarged, upper border being just above the nipple line and lower about three inches below the free edge of the ribs. Painful nodule, about the size of a walnut, was felt at the edge, just to the right of the gall bladder. Smaller non-painful nodules felt to the left. Free edge of the spleen could be distinctly felt. Apex beat of heart displaced upwards and outwards. A small mass in the right iliac and lumbar regions just above Poupart's ligament opposite the anterior superior spine of the ilium. Considerable fluid in peritoneal cavity. It again became necessary to change the diagnosis, and revert back to the original, calling it cancer, involving probably many of the abdominal organs. The liver dullness increased gradually until it appeared to occupy not only the greater part of the abdomen, but also the right chest to such an extent as to slowly but very completely shut off the ingress of air. The last week no breath sounds could be heard over the right chest, except above the clavicle. The ascites slowly disappeared and tympanites appeared, which was very troublesome and persisted in spite of all treatment. Pain has been almost constant and referred to the whole abdomen. Later it was so severe that large doses of morphine had but little effect upon it. The last week her suffering was extreme. In January she had diarrhea for a couple of weeks. In February she had an intestinal hemorrhage, about two pints of dark tarry blood. Considerable shock followed, and from this time she failed rapidly. Jaundice was never present at any time of her illness. Neither was nausea or vomiting. Urine contained albumin, and was diminished in quality. No mental symptoms appeared, her mind remaining perfectly clear until the very last. About five years ago she had several hemorrhages from her bladder, which were thought to be renal in origin. Family history: Father, mother, two brothers and one sister died of consumption; one brother alive and well. Past history: No children; one miscarriage seventeen years ago at six months; always enjoyed good health until 1894.

Dr. S. M. White, of the University of Minnesota, reported upon the post-mortem and microscopic finding as follows:

The body was that of an emaciated female, of middle age, with an edema of left leg and thigh. The liver was found greatly enlarged and adherent to peritoneum. The lower border was about 4 inches below the costal arch in the right mammary line, and the upper surface was on a level with the third rib, displacing the thoracic organs and causing collapse of the lower lobe of the right lung. In removing the liver, a large thin-walled cavity, containing about 10 oz. of pus, was opened. The liver was occupied for the most part, particularly in the right lobe, with a great number of thin-walled cysts, in size from 1 cm in diameter to those containing 150 cc, of straw-colored fluid, with occasional whitish flocculi. The gall-bladder contained a small amount of green bile, and the bile ducts were patent.

The weight of the liver was about 4500 gm. The kidneys were displaced downward, by the enlarged liver, and the lower pole of each extended over the brim of the pelvis. The left weighed 1135 gm, and the right 855 gm, after opening several cysts. Both kidneys seemed to be made up entirely of cysts, the largest 2 cm in diameter. The cysts were for the most part thin-walled, and contained clear fluid, but some seemed hemorrhagic, i. e., gave evidence of old hemorrhages. On opening the right kidney, the pelvis seemed somewhat dilated, but contained no cysts. Between the cysts were occasional remnants of kidney tissue, sometimes appearing fatty. No cysts were found in other organs. Central nervous system not examined. The cysts in both kidney and liver, particularly the latter, were of the multilocular type, and at the autopsy the possibilities considered were, first, echinococcus of the multilocular type described first by Virchow, in which there is exogenous, instead of the usual endogenous, development of the daughter cysts; second, that remarkable condition spoken of by Wilks, in which cystic condition of the liver and kidneys has been found associated.

Subsequent examination of the fluid failed to reveal hooklets, but showed the presence of epithelial cells in the cysts. The time since autopsy had been too short for an exhaustive examination of the fluid, but the following facts had been ascertained: Albumin was present in very large amounts, the fluid becoming nearly solid on boiling; the reaction was distinctly alkaline, specific gravity, from the liver 1023, from the kidney 1029; urea from the liver .4 per cent, from the kidney .8 per cent; a small amount of reducing substance, probably dextrose, no succinic acid; no bile pigments; cholesterin in the kidney.

Time had been too short for a thorough microscopic examination of the cysts, but one small cyst from the liver has a fibrous wall, with an occasional epithelial cell upon the inner surface. The cysts are evidently not parasitic, and the condition, particularly in the liver, where it is very rare, is of extreme interest.

Further study of the condition, to determine, if possible, the mode of origin of the cysts, particularly in the liver, is promised.

Dr. James E. Moore, of Minneapolis, read a paper entitled "The Surgical Significance of Carbuncle of the Upper Lip and Face," of which the following is an extract:

"A carbuncle is an acute inflammation of a hair follicle and its accompanying sebaceous gland. It is the same as a furuncle, except that there is more of it. The infection is usually by the staphyloccus aureus. It often begins so abruptly that the patient thinks he has been bitten by an insect. Carbuncle of the upper lip and face is confined almost exclusively to children and young adults. In this location it is a very dangerous malady because of the tendency to general sepsis and of venous thrombosis extending to the sinuses of the brain. A post-mortem report of a case made by Wherry to the Chicago Pathological Society is mentioned, in which it is stated that the patient died in about a week from a carbuncle of the upper lip and face. Pulmonic abscesses, fibrino-purulent pleuritis, abscess in the spleen and acute cloudy swelling of the kidneys and liver were found. Pure cultures of staphylococcus were found everywhere.

"The general symptoms vary greatly in different cases but when the upper lip or cheek is involved they always become very grave. The prognosis is always grave in old people and in young people when the lip and cheek are involved, because of the double danger of pyemia and septic meningitis. A case was cited occurring in the writer's practice where a boy died from septic meningitis following a traumatism of the upper lip, showing the close anatomical communication between these parts.

"A carbuncle can be differentiated from a malignant pustule by the fact that the former begins as a papule and the latter as a pustule. The writer believes that the so-called conservative treatment of carbuncles by poultices, plasters, etc., is seldom the best, and that nothing but the most radical treatment is suitable when the disease is located in the upper lip or cheek. He advises that all necratic tissue be removed by the knife, scissors and sharp bone-curette, that the cavity be dried, swabbed with 95 per cent carbolic acid, followed by alcohol, and the cavity packed with iodoform gauze.

"He claims that everything is in favor of this treatment and nothing against it, except the scar which is insignificant as compared with the danger of the let-alone treatment. This treatment relieves the pain and reduces the temperature at once, and the patient's general condition very soon improves. The writer reports three cases of carbuncle of the upper lip and cheek operated upon within two years, two of which died, the first because the treatment was not early and radical enough, and the second because the radical operation was delayed too long. The third case was operated upon early in the manner previously described and made a prompt and complete recovery with a very small scar. He concludes that when the disease is located in the upper lip or cheek the surgeon should insist upon early radical operation because the disease in this location is accompanied by a frightful mortality-rate when treated in any other way, and is very amenable to radical treatment when practiced early."

Dr. Rothrock said that he had had no clinics experience with facial carbuncle, but had had the opportunity to examine three cases post-mortem and microscopically and two others bacteriologically alone. One of the first three cases had shown septic meningitis, and the other two general pyemia. The bacteriological examination of all of these cases showed staphylococcus pyogenes aureus. He agreed with Dr. Moore as to the importance of the condition and its high percentage of mortality. He inquired whether Dr. Moore regarded it as justifiable to undertake operation after general infection had evidently occurred.

Dr. J. W. Little, of Minneapolis, expresses his approval of the paper, and endorsed its conclusions. He reported one case of carbuncle of the lip, which had been operated upon early by free incision, curetting with sharp spoon, and application of carbolic acid. He re-emphasized the importance of early operation, and regarded interference, after general septic symptoms had appeared, as useless.

Dr. A. W. Abbott, of Minneapolis, expressed his indebtedness to Dr. Moore for his reminder of a somewhat rare condition. He inquired of Dr. Moore as to the assurance of the statistics cited, regarding carbuncle of the neck. The report was at variance with his own experience, for he recalled a majority of his cases of carbuncle of the neck as occurring in young persons. He distinguished between the minor carbuncles of the face and neck, and the major carbuncles of the back, which commonly appear in old persons.

Dr. W. A. Dennis, of St. Paul, reported a case of facial carbuncle, complicating diabetes, in a man of 60 years of age. The diabetes was in an advanced stage.

Dr. C. A. Erdmann, of Minneapolis, referred to the anatomic conditions which explain the danger of carbuncle of the face. He recalled the fact that the facial vein is a straight vessel, communicating directly with the ophthalmic vein, which led as an emissary vessel to the cerebral circulation.

Dr. T. S. Roberts, of Minneapolis, cited a case occurring in a woman of 60, in whom the entire lower lip and chin was involved. Expectant treatment had been employed, although a surgeon was consulted. Injections of carbolic acid were made, and later a free incision, sloughs were removed, and the patient made a safe recovery, but exhibited a marked transverse scar dividing the lip.

Dr. C. M. Carlaw, of Minneapolis, referring to the question of blood supply of the face noted by Dr. Erdmann, asked Dr. Moore whether it was his experience that sepsis was conveyed through the blood channels to the brain. He noted two cases of carbuncle, one of the lip in a middle-aged man, and the other of the back of the neck of a young woman who was suffering with interstitial nephritis. Both had made good recoveries.

Dr. J. T. Rogers, of St. Paul, congratulated Dr. Moore upon bringing so important a subject before the Academy. He disagreed with Dr. Abbott in terming the condition a rare one. He believed it was frequently recognized nowadays, and was usually treated sufficiently early to avoid the horrible picture which severer and neglected cases presented. He had seen but one fatal case of malignant carbuncle of the face, which was in a young woman, who had been supposably bitten by an insect, and had been treated for a few days on the expectant plan while away from home, but who had returned with a rapidly progressing sepsis. Multiple incisions had been made, and the foci of infection were thoroughly removed, but with no effect on the general condition, and the patient died. He recalled a case in another young woman with a similar lesion, in which a less radical incision had been made than that suggested by Dr. Moore. In this case hot boric acid dressings had been applied continually to the wound. The case was for several days an occasion of alarm to him, and he gave a very guarded prognosis, but the patient had fortunately recovered. He asked Dr. Moore what his experience had been in the treatment of furuncles and carbuncles in their early stages by carbolic acid injections. He had himself tried the method, but without success. He commended the use of carbolic acid followed by alcohol after free incision.

Dr. R. O. Beard, of Minneapolis, inquired of Dr. Moore whether he had noted a contagious quality in cases of carbuncle of face and neck. He recalled two instances in which three or four members of a household had been similarly attacked within short periods of time.

Dr. J. E. Moore, in closing the discussion, said that he counted himself fortunate in that he had provoked so interesting and general comment upon the subject.

Replying to Dr. Rothrock, he said that there is doubtless a time in these cases when operation is useless. If it were certain that thrombosis had formed and general sepsis had occurred, he would hesitate to operate.

The statistics which were questioned by Dr. Abbott, had been obtained by Dr. Mann, with the assistance of the able medical librarian of the Hennepin County Library. The mortality which they showed, was the accepted one at the present time.

In regard to Dr. Erdmann's suggestion of the direct venous communication with the brain, he believed this undoubtedly to be the path of thromboid infections.

He did not doubt that Dr. Roberts' case recovered in consequence of the free incisions which had been made. He had rarely, if ever, found a definite statement that thrombi had been actually discovered in these cases, although the danger of thrombosis had often been referred to. Dr. Hectone in making his elaborate report, had not mentioned their occurrence. He believed that infection was oftener general than meningeal. He had given up the treatment by carbolic injections in disgust. He had had no experience with the conveyance of the disease through families, although he regarded it as a quite possible matter. In the light of his own experience, he would rather operate early and take the chances even of severe scar than of probable death.

HENNEPIN COUNTY MEDICAL SOCIETY

A. E. Benjamin, M. D., Secretary

A stated meeting of the Hennepin County Medical Society was held in the rooms, April 7, 1902, the President, Dr. H. L. Staples in the chair. The minutes of the previous meeting were then read and approved.

Dr. Weston read the following resolution on the death of Dr. R. E. Cutts, which was adopted by the society:

The Hennepin County Medical Society desires to express its profound sorrow at the sudden death of Dr. R. E. Cutts, which occurred March 19.

He has served the society as treasurer, and the current year was chairman of the executive committee. He has always been zealous in forwarding its best interests, and has been an earnest, active and loyal member.

By his death, the medical profession loses an ambitious, conscientious and progressive worker, whose ideals were high, and who discountenanced anything which tended to lower the dignity of his calling. Honesty, uprightness and fidelity were marked traits in his character, and had won for him the esteem of all who knew him.

We mourn his loss, and extend to his bereaved family our sincere sympathy. It is hereby resolved that this note be spread upon our records and that a copy of the same be sent to Mrs. Cutts.

—A. E. Benjamin,
—C. G. Weston,
—G. D. Head,
Committee.

Applications for membership were as follows: Dr. Wiig, Dr. W. P. Spring, Dr. C. J. Lind and Dr. S. M. White. These were referred to the Board of Censors.

A change in the order of business was permitted, and Dr. W. A. Hall, president of the State Medical Society, read the following resolution:

Resolved, that the Hennepin County Medical Society approves of the proposed changes in the constitution and by-laws of the Minnesota State Medical Society, and is in favor of affiliation.

Dr. Hill made some remarks upon the resolution, and moved its adoption by the society. This motion was seconded and the resolution adopted.

Dr. Frank C. Todd reported a case of septic thrombosis of the sigmoid and lateral sinus, which he had operated upon, laying open the sinuses and ligating the internal jugular.

This was a case of a robust male, age 19, who had a chronic suppuration of the middle ear since he was 6 years old. Examination showed a discharge from the middle ear, entire absence of drum, necrosis of ossicles and granulation-tissue in the middle ear and canal. Patient had been suffering for sometime from headache located in the temporal region on both sides, and had developed the following symptoms: vertigo, nausea with vomiting, gradual rise in temperature running from 99° to 102°. He grew better for a few days, and then suddenly had a rigor followed by a rise of temperature to 104 4-10°. Following this, a diagnosis of retained pus and probable sinus thrombosis was made, and the mastoid entered. There was eburnated bone for three-quarters of an inch, and then a cavity (antrum) one-half inch or more in diameter filled with granulation-tissue, pus and necrosed bone. After promoting free drainage without exploring the sinus the patient was put to bed. There was some relief in temperature and other symptoms for a day or two, but the vomiting, anorexia, mild chills and sudden rises of temperature recurred (temperature taken every hour), and a diagnosis was made of septic sinus thrombosis, and an operation was performed as follows: With the assistance of Drs. J. W. Little and Wm. R. Murray, the internal jugular was located after considerable searching being so small (nearly empty) that it was difficult to locate it. It was ligated and drained, then the sigmoid sinus was uncovered and aspirated, pus found present, sigmoid and lateral sinuses laid wide open from jugular bulb to the Torcular Herophili, pus being present in this whole area. Patient is now making good recovery.

Dr. Dunsmoor exhibited an appendix removed from a patient with the following history: The patient, a neighbor of his, had been feeling unusually well the night before. An attack of pain came on suddenly, and Dr. Dunsmoor was called. The patient was immediately moved to the hospital, and twelve hours from the time of the attack the appendix was removed. It was black and gangrenous. In the specimen shown, the upper part had been removed. Subsequent to operation, the patient developed measles and then pneumonia. Patient now sits up.

Dr. Dunsmoor reported another case of appendicitis. The patient, a woman, had traveled from Dubuque, Iowa. He operated a few hours after the attack, but the appendix was found to have ruptured. In answer to a question from Dr. Bell about the number of attacks, Dr. Dunsmoor replied that this was the third known attack.

Dr. Little reported a case of appendicitis which he had seen at 2 o'clock p. m. At seven p. m. he operated, and found the appendix ruptured. This patient recovered. Dr. Little also reported a case of gall-stone which he operated upon. A stone was found in the hepatic duct. In endeavoring to remove it, it slipped up toward the liver, and he was unable to extract it. The gall-bladder was left open for drainage.

Dr. Hunter reported the following case of pulmonary embolism: A case of sudden death on the 9th day (of typhoid fever) from probable pulmonary embolism. Patient, Miss M——, age 16, fell ill gradually, complaining of diarrhea, cough and malaise. She had a white-coated tongue, slightly distended abdomen, gurgle in the right iliac fossa, and a few scattered râles. The heart sound was normal, temperature 102°, pulse 84-90. Widal reaction present. The diagnosis of typhoid fever was made with the expectation of a mild course. On the 9th day, my visit was made at 7 p. m. There had been no untoward symptoms, and patient expressed herself as fully too well to lie in bed. The tongue was clearing, temperature 102.5°, pulse 90 and regular. The abdomen was slightly distended, as there had been no bowel movement. An enema was ordered. The mother came with the injection at about 8 p. m. She asked her daughter to lie on her side. As patient rolled in bed, she began gasping for breath. She cried out for more air, and continued to breathe with the greatest difficulty, and became cyanotic. Drs. Aylmer, Laliberte and Cowles were present at 8:30. At 9 p. m. she was dead, having gradually lost consciousness. No autopsy was allowed.

I have thought it worth while to report this case, though its meagre and unconvincing details carry no finished lesson. Sudden death by typhoid fever must be very rare, though its expectation is ever present with the practitioner. I have not been unmindful of it during convalescence. It may be considered demonstrated, I believe, that at this time it may occur and is due to a typhoid myocarditis for the most part. Dr. Kennedy who has searched the literature in the library, has been able to find but three recorded cases of sudden death. One of these, as early as the 8th day, was from thrombosis of branches of the middle cerebral artery. This occurred in Dr. Osler's clinic. It seems to me most probable that death in my case was from pulmonary embolism, though why this should have happened is not clear.

Dr. Nippert asked if Dr. Hunter had examined the heart in this case. Dr. Hunter replied that he had done so the night before the death of the patient and the apex beat was normal. He also stated that the patient was a strong, robust, active girl, but had exhibited at times a cardiac weakness and faintness.

Dr. Sweetser reported a case of gall-stone in which were found 361 stones, 25 being of fairly good size. He exhibited the stones in a bottle.

Dr. Nippert then read his paper entitled "Clinical Features, Diagnosis and Treatment of Pneumonia," published, with discussion, in this issue of the Lancet.

It was moved and seconded that the other two papers on the program be postponed to the following meeting. This motion was carried. The following bills were allowed:

C. E. Knapp, printing	$ 12.00
Postage, etc.	2.25
Dr. Haggard	1.60
Wessling	10.00
Bigelow, pamphlets	11.22
Lea Bros.	9.00
Cards for library	6.75
McNeil	1.50
Library	93.63
Total	$147.95

Dr. Staples gave a report of the annual banquet. He stated that after all bills were paid, there was a balance of about $25.00.

Dr. Little presented the Society with a large picture of Dr. Gross. A vote of thanks was tendered the donor.

The committee that purchased flowers for the funeral of Dr. Cutts, was also thanked.

Dr. Burton presented the Society with a set of Medical Records of the Civil War, for which a vote of thanks was offered.

A vote of thanks was also tendered to the committee that raised special funds for purchasing new books for the library; and to Mr. Weinhold, Mr. Benz, and Mr. Wessling for their liberality to the committee who secured the necessary articles for the banquet.

Dr. Head gave a report of the library committee, and stated that they had raised $588 of the $600 promised. It was found necessary to purchase an extra rug, and $75 was still needed to settle up their account. He suggested that the money (about $58) left from the entertainment of the American Medical Association, and the amount left from the annual banquet, be turned over to the treasurer of the society, and this money used for settling up the account of the library committee.

It was moved and seconded that a committee be appointed to draw up new by-laws for the society. It was ordered that they be printed and put in the hands of the society. Drs. Hill, Weston and Jones were appointed as a committee, to act in conjunction with the library committee in this matter.

The meeting then adjourned.

BLUE EARTH COUNTY MEDICAL SOCIETY

A meeting was called for the reorganization of the Blue Earth County Medical Society along the plans suggested by the committee on the reorganization of the American Medical Society at its last meeting. The organization was perfected and the following were elected officers: President, J. Francis Schefick; First Vice-president, F. D. Brandenburg; Second Vice-president, John Williams; Third Vice-president, Julian A. Heilscher; Treasurer, DeLos D. Smith; Secretary, Carl J. Holman; Judicial Council, Wm. Frisbie, Madge Timmerman-Holman, and S. D. Sour.

A resolution of approval of the plan of reorganization of the Minnesota Medical Society was passed.

The subject of discussion was "Puerperal Fever, Its Prophylaxis and Treatment."

After a social hour, the meeting adjourned, to meet again on the evening of the first Thursday of May, when the following papers will be presented and discussed: Anesthetics in Surgery, F. D. Brandenburg; Anesthetics in Medicine, J. A. Heilscher; The Use of Cocaine and Other Local Anesthetics, D. D. Smith; Intra-spinal Anesthesia, M. T. Holman.

Carl J. Holman, Secretary.

NO QUARANTINE AGAINST TUBERCULOSIS

That this climate has saved the lives of many who have come early, cannot be doubted. There is no need to talk of quarantining against tuberculosis. Such a course is both unnecessary and impracticable. Doubtless many persons with advanced tuberculosis should not be sent here, but for those who can be benefited by coming, Colorado should have nothing but a warm welcome.—Colorado State Board of Health Report, 1900.

BOOK NOTICES

Atlas and Epitome of Otology. By Gustav Bruhl, M. D., of Berlin, with the collaboration of Professor Dr. A. Politzer, of Vienna. Edited, with additions, by S. MacCuen Smith, M. D., Clinical Professor of Otology, Jefferson Medical College, Philadelphia. With 244 colored figures on 39 lithographic plates, 99 text illustrations, and 292 pages of text. Cloth, $3.00 net. Philadelphia and London: W. B. Saunders & Co., 1902.

Like all of Saunders' hand-atlases, this book represents a high degree of excellence. Accustomed as we have been to the somewhat wooden or lifeless appearance of the colored plates illustrating medical works, these illustrations, which appear in all of these hand-atlases, surprise us with their perfection.

In this work are shown plates illustrating the organ of hearing in the infant andadult, including sections of the entire temporal bone, so exactly colored that one feels that he has the specimen actually before him. There are illustrations of normal structures and of diseased conditions of the different portions of the temporal bone, of the sinuses, brain, tympanic membrane, tympanum, and auricle.

This book is of most value from a clinical standpoint. There is sufficient text to explain the illustrations, but the cuts represent the anatomical and pathological conditions with such striking exactness that the student will be more aided in making a diagnosis than he could be by any amount of reading.

In the collection are included 30 macroscopic and 24 microscopic preparations of Dr. Politzer, and 54 macroscopic and 40 microscopic preparations of Dr. Bruhl. Besides these there are 12 plates representing diseases of the auricle and 48 flash-light pictures of drum-heads taken from patients of Dr. Bruhl's polyclinic, slightly enlarged.

In the text there is a concise explanation of the anatomy and physiology of the organism of hearing, as well as of the examination of patients. In the few pages that are left one could hardly expect much in regard to the diseases of the ear, and what is written does not give a very definite idea to the student. This part seems to be written with the idea of getting as much as possible in the few pages that are left. It is somewhat on the order of a quiz compend in its compactness, and one would better look to some regular textbook for didactic instruction. The true worth of the book is in the illustrations, and it is a book which every specialist should own, and every man who is taking up the study of the ear should purchase among the first books, whether he be an embryo specialist or a general practitioner.

Frank C. Todd.

Visual Economics. With Rules for Estimation of the Earning Ability After Injuries to the Eyes. By H. Magnus, Med. Dr. of Breslau, Germany, and H. V. Würdemann, M. D., of Milwaukee, Wis. 132 pages. Price $2.50. Milwaukee: C. Porth.

The above volume, which is intended for the use of the medical and legal professions, business corporations, and insurance officials, discusses, in a purely scientific and mathematical way, the interesting subject of visual economics. This is the first attempt in English medical literature to handle exhaustively the subject of estimation of damage to any working man's capacity from ocular injury, and, by placing it on a scientific and rational basis, to determine the indemnification to be given, in a way that will be just to the working man, to the person responsible for the damage, to the employer, and to the casualty company.

The work starts with "the supposition that the earning ability for any vocation requiring eyesight is practically synonymous with the visual earning ability, and that injuries to the eyes affecting the vision have a direct detrimental effect upon the earning capacity of the individual. Mathematical formulas have been adduced by which an estimation may be made of the pecuniary loss to the individual by reason of his defect in visual acuity.

Part First includes, "Introduction," "Legal Status of the Physician in Relation to Accidents," "Different Methods for Estimation of the Loss of Earning Ability from Ocular Accidents," "General Principles for Estimation of the Relation of Ocular Injuries to the Earning Ability and of Injuries Thereto," "Estimation of the Damage to Economic Vision," and "Method of Mathematical Calculations."

Part Second treats the subject of "Special Consideration of Various Ocular Injuries and Visual Defects."

Part Third is given to "Estimation of Pecuniary Loss to the Individual by Reason of Visual Imperfections."

Part Fourth gives "Tables for Estimation of the Different Forms of Damage to the Visual Earning Ability."

The work puts upon a scientific basis the estimation of damage in ocular injuries and the indemnity to be allowed, and the reviewer takes pleasure in recommending the volume.

Wm. R. Murray.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. E. C. Branch, of Wheatland, N. D., has located in Fargo.

Dr. C. B. Powell, of Buffalo, Minn., has located at Monticello, Minn.

Dr. Henry H. Haskins, of Canton, Minn., has settled in Perth, N. D.

Dr. Ira L. Edmunds, of Clearwater, Minn., has removed to St. Cloud.

Dr. C. V. Templeton, of Woonsocket, S. D., was married last month.

Dr. E. R. Jellison, of Seaforth, Minn., has located in Clara City, Minn.

Dr. S. M. Ferguson, of St. Louis, Mo., has located in White Earth, N. D.

Dr. Aaron F. Schmitt, a recent graduate of Rush, has located at Wells, Minn.

Dr. Gustav Schwyzer, of St. Cloud, Minn., will spend the summer in Switzerland.

Dr. G. E. Campbell, of Wykooff, Minn., is slowly recovering from a long illness.

Dr. D. Kilinoff has been appointed resident physician of the Stillwater City Hospital.

Dr. G. P. Mills, formerly of Missoula, Mont., died last month on his ranch near Lo Lo, Mont.

Dr. T. R. Watson, of Zumbrota Falls, Minn., has taken the practice of Dr. Crewe, of Zumbrota.

Dr. S. M. Janes, of Jordan, Minn., will spend a month at the Chicago Polyclinic on surgical work.

Dr. D. W. Robinson, of Pierre, S. D., has been appointed a member of the State Board of Health.

Dr. J. E. Crewe, of Zumbrota, Minn., has formed a partnership with Dr. J. G. Cross, of Rochester.

The Missoula hospital, managed by the Sisters of Charity, will be enlarged at an expense of $10,000.

Work has been begun on the new St. Joseph Hospital of Brainerd, Minn. The building will cost about $30,000.

Dr. H. C. Plummer, of Rochester, Minn., has returned from Chicago, where he has been doing special clinical work.

The Red Cross Hospital, of Duluth, has been incorporated, and will make many improvements in its building and equipment.

Dr. Thomas Howell, formerly of Winona, Minn., has been appointed superintendent of the City hospital of Worcester, Mass.

Dr. L. C. Smith, of Dickinson, N. D., has returned to his practice after an absence of two months in Philadelphia, where he has been doing special work in the hospital.

Dr. H. S. Schaefer has located in Jasper, Minn. She was formerly connected with the Northwestern Hospital and once an assistant of Dr. A. H. Abbott, of this city.

Dr. D. F. Quigley, of Litchville, N. D., is doing post-graduate work at Rush. Dr. M. D. Westly, of Minneapolis, has charge of Dr. Quigley's practice in the latter's absence.

Dr. Sherping, who had made plans to build a hospital at Fergus Falls, Minn., has transferred his interests to the Deaconess Association, and a building to cost about $10,000 will be erected.

The twenty-second annual meeting of the Minnesota Valley Medical Society will be held at Mankato, May 6. This will be the most interesting meeting the society has ever held, and the attendance promises to be large.

The Crow River Valley Medical Society was entertained by the physicians of Willmar at its meeting on April 9. Dr. Pilon, of Paynesville, was in the chair. After the session, Dr. F. Harold Frost gave the society a banquet at the Merchants' hotel.

The N. D. State Board of Medical Examiners licensed the following at the April examination: S. M. Johns, Velva; W. L. Gordon, Steele; L. A. Sorchet, Bottineau; J. P. Widemere, Rolla; S. B. Shaw, Jamestown; W. Van de Ever, Milton; W. H. Leach, Sioux City, Ia.; Roy W. Pence, Balfour; Guy D. Murphy, Willow City; F. O. Gronvold, J. A. Carter, Church's Ferry.

At the annual meeting of the State Board of Medical Examiners, held last month in this city, Dr. A. B. Cole, of Fergus Falls, and Dr. C. M. Cannon, of St. Anthony Park, met with the Board for the first time. The following candidates received licenses to practice in this state: Henry L. Ulrich, Minneapolis; Joseph A. Duclos, Henderson; Joseph T. Speck, Barnum; Harry S. Vernon, Lewiston; Charles F. Watkins, Brainerd; Oscar F. Mellby, St. Paul; Oscar H. Urstad, Kiester; Carl W. Slusser, Rock Rapids, Iowa; Henry Wiedow, Iowa City, Iowa; William H. Rumph, Chicago, Ill.; Claud W. Woodruff, Wykoff; Otis O. Benson, Rankin, Ill; Monroe M. Ghent, Hibbing; Lewis A. Ward, Bemidji; Edward Darrow, West Superior, Wis.; Mathias A. Lee, Benson; Olaf Sand, Pelican Rapids.

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A CASE OF DUODENAL ULCER, STENOSIS OF THE PYLORUS, GASTRECTASIA, PERFORATION AND DEATH

By George Douglas Head, M. D., and A. E. Williams, M. D.

MINNEAPOLIS

Mrs. C——, aged 38, housewife, two children living and well, and none dead. When 18 years of age she had an attack of pain in the upper abdomen, accompanied with vomiting and much prostration which lasted two weeks or more. Ten years ago after her marriage she had a second similar attack of gastric trouble, characterized by belching of gas, vomiting, weakness and pain in the upper abdomen. The pain was severe, and would come on at certain times during the night. Belching up of gas would usually relieve the pain.

Since the second attack she has had more or less gastric trouble, and especially severe cramping pains in the upper abdomen, which would be relieved by the belching of gas. About five years ago, during and for two years following the birth of her last child, she was perfectly free from her stomach trouble. She has now, July 25, 1900, been sick for a number of weeks with an unusually severe attack of her stomach trouble.

Sometimes once a day, or only once in two or three days, she vomits up large quantities of liquids and sour food masses.

She has never vomited blood. She has lost much in weight and strength of late, although she is even now able to be about, and do light work.

After taking food she feels discomfort and sometimes pain in the upper abdomen. The belching up of gas relieves this. Her appetite is poor, and much of what she eats is vomited up undigested.

On examination one sees a tall, spare woman, weighing 125 lb. She looks somewhat anemic and says she has lost 10 lb. in the last six weeks. Nothing suggestive is elicited in the examination until the abdomen is reached. The abdominal walls are very lax, and the organs within the abdomen readily palpated.

In the right lumbar region is a freely movable mass, which slips up under the ribs on bimanual palpation (a movable right kidney). In the left lumbar region is another freely movable kidney-shaped body, which slips up under the ribs on bimanual palpation (a movable left kidney).

In the left upper abdomen the edge of the spleen is plainly felt projecting two finger-breadths below the costal margin. A point of great interest is the apparent position of the stomach. When the woman lies on her back in perfect rest the stomach seems to take a position very low in the abdomen, the lesser curvature being at the umbilicus while the greater curvature is outlined midway between the umbilicus and the pubes.

Distension of the stomach with gas still more definitely outlines it. The upper border is at the umbilicus while the lower border reaches now to the pubic bone. After dilation as one watches the abdomen, waves of peristalsis, the most marked the writer has ever seen, pass over the stomach from left to right. Striking the abdomen with a wet towel or dashing a little cold water on it will cause the peristaltic waves to appear.

On July 26th the patient was given an Ewald test-meal, and ten and one-half ounces of chyme were removed by tube. In washing the stomach it was observed that 48 ounces of fluid could be retained without the patient's complaining of discomfort. On palpation of the abdomen to-day there can be felt, to the right of the umbilicus and a little above it, a hard mass, the size of a walnut, which is somewhat sensitive to touch. As gas can be felt bubbling through it, this is probably the pylorus. The stomach contents examination was as follows: About 30 cc of a curdy, milky chyme were secured, which, on standing settled into two layers. The reaction is acid. Free HCl is present in small amounts, as it also lactic acid. Microscopically the sediment contains large numbers of starch granules and fat globules.

The blood examination showed 4,500,000 reds, 8,000 whites, and 75 per cent hemoglobin. The urine was normal. The patient was in St. Barnabas Hospital from July 26 to Aug. 16, 1900. During this time she gained in strength and weight. At various times during her stay careful examinations of the abdomen were made, test-meals were given, and the stomach contents analyzed. At every examination previous to its distension with gas, the stomach would take a position with the lesser curvature at the umbilicus, and the greater curvature midway between the umbilicus and pubes. Many times when the abdomen was uncovered the peristaltic waves would sweep over the stomach from left to right, immediately outlining, better than percussion could do, the position of that organ. On distension of the stomach with gas, it could usually be outlined with the upper border a little above or at the umbilicus, and the lower border at or a little above the pubes. Following the stomach tympany to the left, it would seem to extend in an unusually narrow zone up under the costal margin toward the diaphragm. The stomach tympany did not cross the median line above the umbilicus.

After the test-meals the fluid secured was of the character heretofore described, and with one or two exceptions always contained a small amount of free hydrochloric acid. The amount of HCl was never up to normal, and many times only showed a trace of color with the Gunzberg test.

The abdominal walls at all times were exceedingly lax. Both kidneys were freely movable and the spleen could always be felt two finger-breadths below the costal margin.

At two of the examinations made while the patient was at the hospital, a small mass was felt to the right and above the umbilicus, which was tender to touch and movable. This mass did not change in size from day to day. Sometimes it could be felt, and again careful palpation would fail to locate it. With careful diet, a close-fitting abdominal bandage, lavage, dilute hydrochloric acid, strychnia, and massage, the patient left the hospital Aug. 16th, having gained 6 lb. in weight, and feeling much better. The belching of gas and the enlarged stomach still persisted.

The diagnosis was stenosis of the pylorus, gastrectasia, and splanchnoptosis.

The prolonged history of indigestion, the absence of profound anemia, the presence of free HCl, and the absence of a growing tumor in the epigastric region were considered sufficient evidence for excluding carcinoma of the stomach.

The small amount of free HCl in the stomach contents, the absence from the history of the vomiting of blood, and the failure to detect a tender point in the stomach area, ruled out with probability ulcer of the stomach.

Five months after leaving the hospital the patient was again seen. She had gained 6 lb. more in weight, and felt much better in every way, but could not go longer than from two to four days without using the stomach-tube. The stomach was again outlined and on distension with gas reached the pubic bone. The gastric contents were sour-smelling, highly acid, and contained a small amount of free hydrochloric acid.

On March 2, 1901, the patient was again examined. No change in the position of the stomach or the character of the gastric contents was noted. The tenderness in the region of the pylorus was not present, nor could a mass be outlined. As the patient was losing in weight gastro-enterostomy was advised, and was refused. In July a letter from the patient stated that she was much worse, had lost 15 lb. in weight, and was a continual sufferer from the belching of gas, vomiting of sour masses, and pain in the upper abdomen. Gastro-enterostomy was again advised, and again refused, the patient preferring to try other treatment.

REPORT BY DR. A. E. WILLIAMS

On Aug. 19, 1901, Mrs. C—— was found in a cyanosed pulseless state, with cold extremities, conscious, and able to answer questions. Her husband stated that some little time before, while getting into a carriage, she had suddenly fainted, and was carried back to her room. She did not respond to cardiac or respiratory stimulants, and died within an hour.

Post-mortem notes, made six hours after death.—The body is much emaciated, and color of the skin extremely pale. The abdomen is tympanitic and much distended, and on section a milky-white fluid of the odor of whey runs out. The abdominal cavity is filled with this fluid. At various points on the peritoneum a fibrinous exudate is present. The intestinal coils are not adhered together by this exudate, but are much congested. The stomach is enlarged, the greater curvature lying midway between the umbilicus and the pubes. On lifting up the stomach a perforation is seen upon the posterior surface of the duodenum within 2 cm of the pyloric end of the stomach. An incision was made in the duodenum near the pylorus. The pyloric opening would not admit the tip of the little finger. The incision was continued through the thickened pylorus into the stomach, and the upper part of the duodenum and the pyloric end of the stomach were opened to view.

Two ulcers could not be seen situated on the posterior wall of the duodenum, and within one inch of the pyloric opening. The ulcers lie very near together. One is healed over, while the other has perforated through the wall of the duodenum. The stomach is unusually long and narrow, and has, near its middle part, a constriction, which narrows its lumen. Its greater curvature measures 61 cm; its lesser curvature, 20 cm. In width it varies from 8 cm., near its mid-portion, to 12 cm. at the pylorus and 13 cm. at the cardia.

Of the other abdominal organs, the two kidneys occupied an unusually low position, but were otherwise normal. The spleen and liver were also normal.

No autopsy was permitted upon the other organs.

VARIETIES AND TREATMENT OF HEMIPLEGIA*

By W. A. Jones, M. D.

D. C.—Clinical Professor of Nervous and Mental Diseases, University of Minnesota

MINNEAPOLIS

Hemiplegia, a disease characterized by a paralysis of one-half of the body, occurs with such frequency that physicians are inclined to look upon these cases as of common origin, and due to one thing, namely, the bursting of a blood-vessel.

If such were the pathology of all cases of hemiplegia, nothing of material interest could be said on the subject. Experience shows, however, that a large number of hemiplegias which come to the post-mortem table reveal neither ruptured blood-vessel nor gross disease of the brain. Each case, therefore, should be carefully studied from an etiological and symptomatological standpoint, to determine the class to which it belongs, for, if hemiplegias differ in their pathology, naturally the line of treatment must conform to the different types. In the majority of cases of hemiplegia, little can be done in the way of medication, but whatever is attempted must be commenced as early as a reasonable diagnosis can be established. Where a gross lesion is suspected, treatment must begin within forty-eight, and not later than seventy-two, hours following the attack, in order to prevent total destruction of areas in the brain. In the milder forms, evidently due to passing systemic errors, the diagnosis is made early, and treatment applied at once.

It is essential in the first instance to know the history of the patient, his life, mode of living, and all of his past illnesses. Failing in this method of inquiry, the diagnosis may be made in many cases by the objective signs, keeping in mind, however, the fact that hemiplegia is a sequence common to many lesions and infections of the nervous system. For instance, hemiplegia may follow injuries to the cerebrospinal system; syphilis, tuberculosis, inflammation and hemorrhage of the meninges; brain lesions due to abscess, sclerosis, tumors, softening or hemorrhage; tabes, multiple, sclerosis, and general paralysis of the insane; disease, obliteration or obstruction of blood-vessels, disease of the renal organs, etc.

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*Read before the Hennepin County Medical Society, May 5, 1902.

Aside from the diseases mentioned, hemiplegia is frequently found associated with the autogenic intoxications, uremia, diabetes, and intestinal toxines; infections which accompany exanthematous and other febrile disorders; influenza, alcohol and mineral poisons. Hemiplegia is also found in some of the neuroses in which the pathology is still undetermined, as in chorea, hysteria and paralysis agitans.*

The recital of the preceding diseases as possible factors in the production of hemiplegia suggests the probable type of the paralysis, as well as the line of treatment to be followed in many cases. In others, however, the picture is not distinct, and the diagnosis depend on the exclusion of certain diseases or the narrowing of the field to a few of the most probable pathologic states. It is maintained by some authorities that atheromatous vessels without rupture are responsible for more hemiplegias than hemorrhage from a vessel.

Gowers, in his "Clinical Lectures," says that "Embolism and thrombosis from syphilitic disease, as causes of hemiplegia, embrace certainly ninety-five per cent of the cases of sudden onset in early life."

It seems very probable that the majority of hemiplegias are due either to a hemorrhage or an obliteration of a blood-vessel: the minority are due to gross brain lesions or systemic diseases of non-nervous organs.

Let us consider a few of the commoner forms.

HEMORRHAGE

Age,—infancy and between thirty and fifty.

Heredity,—history of arterial disease.

Arterial tension,—high, incited by shock, effort or excitement.

Onset,—sudden with paralysis and coma.

Temperature,—reduced internally and elevated on the paralyzed side.

Pulse,—slow and bounding.

Respirations,—hard and noisy, with flapping cheeks.

Pupils,—unequal, conjugate deviation of eyes.

Convulsions,—in cortical or meningeal hemorrhage.

Vomiting,—common if patient is not uremic.

The treatment in such cases should be directed to reduce arterial tension. The patient must be in a reclining position, and cold or ice-bags applied to the head, and heat to the extremities. A calomel, elaterin or croton oil purge, or a high enema of normal salt solution, or Nobles' enema should be given as early as possible. Tincture of aconite in 1 drop doses, fl. ext. veratrium in 2 drop doses, or tincture gelsemium in 5 drop doses, may be given every 30 minutes until a physiological effect is obtained, then less often thereafter.

Should the patient be stout and full-blooded, direct venesection may safely be employed; if frail and with a weak heart such stimulants as strychnia are admissible. Careful attention should be given to the mucous surfaces, the mouth, throat and nose cleansed, and the bladder and rectum guarded.

If the hemorrhage is intra or extra-dural from injury or alcoholism, with an interval of consciousness after the attack, followed by stupor, somnolence, coma and hemiplegia, surgical interference is practically the only remedy, even though the situation is serious or alarming, as medication is rarely successful, even temporarily. These cases call for skillful diagnosis, and skillful and prompt surgery.

The common practice of giving bromides, iodides, and ergot should be discouraged, for they are usually valueless. Nitroglycerin should not be employed in these cases, for harm may result from continued hemorrhage.

The next class of hemiplegias are those which occur from obstructed or obliterated blood-vessels, and are by far the most interesting from a diagnostic and pathologic standpoint, as well as the possibilities of therapeutic aids for improvement. This class embraces diseases of the vessel within and without; an old atheroma with a gradual narrowing of the lumen of the vessel, and its ultimate obliteration, a typical thrombotic vessel; the development of a thrombus on a diseased vessel surface; a specific arteritis; a plug carried in the blood-current from a diseased heart-valve or its formation from an infection process in some remote portion of the body.

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*"Mental and Nervous Diseases," Church and Peterson.

THROMBOSIS

Age,—old people and young adults.

Vessel,—tension low, the seat of inflammation or atheroma.

Heart,—large, weak, or fatty.

Pulse,—weak and soft.

Onset,—prodromata, nausea, vertigo, headache, tire, transient aphasias and numbness of one side or one extremity.

Paralysis,—transient, recurrent, gradually extending and deepening.

Coma,—rare.

Mental state,—confusion, errors, delirium and stupor.

History,—syphilis, nephritis, rheumatism, or alcoholism.

The treatment in thrombosis or diseased vessel states must be conservative and cautious, as there is danger in the use of remedies when the therapist is endeavoring to dilate blood channels to force fluid through them and thus supply the brain with blood.

Heart stimulants are necessary, and nitroglycerin is probably the safest. Strophanthus or spartein may be combined with alcohol in moderate doses in the prodromal stages or during the acute attack. Nitroglycerin should be used continually in small doses, or, if the heart is weak and the tension of the blood-vessels is increased, frequent doses may be given until the vessel is soft and free. Later, it is advisable to use the nitrite of sodium or iodide of sodium in from 5 to 10 grs. t. i. d. To this may be added tonic doses of strychnine.

This line of treatment is serviceable in the heart and renal diseases, which are usually present.

Various other remedies synergistic in their effects may be used as alternates. Antilithiés, antirheumatics, and antisyphilitic medication is occasionally palliative. Digitalis, bromides, and opiates are usually contraindicated as they increas tension, depress the heart or impair its function, and increase the already existing nephritis. In old and slowly developing cases a protracted course of iodides may be used with benefit. Sedatives and mild hypnotics, like cannabis indica, hyoscyamus, and the mild alkaloids of opium are often necessary and imperative.

EMBOLISM

Age,—early life, and in those who suffer from acute heart lesions, infectious fevers, and particularly in pregnant women.

Coma,—transient and slight.

Mental state,—confusion, transient sharp excitement.

Convulsions,—common.

Paralysis,—may be profound: usually transient, subsiding with establishment of collateral supply.

Multiple emboli,—invading a large vessel or one diseased; paralysis may be permanent, and an abscess result if embolus carries infective organisms.

The treatment during an attack should be directed to increase blood-pressure. Browning says: "Place the head very low, tumble the plug along, hoist the flood-gates, and turn on pressure."

Under such instructions, nitroglycerin, nitrite of amyl, and alcohol are indicated, even though there is danger of dislodging another embolus.

The treatment should be instituted as soon as possible, for every moment is precious. "The advance of the plug an inch may reduce the area jeopardized to but a fraction of its original extent."*

Hot applications along the carotids, hot drinks internally or hot enemas, are further aids and should be freely employed.

Syphilis as a cause of hemiplegia is exceedingly frequent. The resulting inflammation of the vessel wall or the growth of a gumma in the vicinity of the vessel is often responsible for a hemiplegia. Usually there are pronounced symptoms, headache, insomnia, parasthesias, transient palsies, and mental confusion. Occasionally such symptoms are wanting, or are undiscovered. In some cases the attack of hemiplegia comes on suddenly, subsiding gradually but completely, thus demonstrating the presence and disappearance of the gumma.

The treatment in such instances suggests itself,—vigorous use of mercury followed or associated with iodides, pushed to the limit.

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*Browning—"Circulation in the Central Nervous System."

Hemiplegia from uremia, intoxication, or infections are best treated by such measures as favor eliminiation by the skin, bowels, and kidneys.

Water, inside and out, hot baths, calomel, castor oil, and salines are usually sufficient to accomplish the relief, if relief is to be obtained. The subsequent treatment will be symptomatic.

The treatment of the chronic stage of hemiplegia demands the utmost perseverance and vigilance.

Rest in bed is imperative. Too many hemiplegics are allowed to get up before they are ready to make the slightest effort, and before the nervous system has recovered from the shock of the insult to the brain. The patient should be encouraged to lie quietly, without making attempts at muscular movement for from four to six weeks. They should not be allowed to test the strength of the limbs, to stand or walk for months, and even when able to sit up or walk with assistance should be carefully restricted to extreme moderation. The position of the limbs must be watched to prevent dragging of weakened muscles, and to modify the inevitable rigidity or contractions. Skilled masseurs should be employed and instructed by the physician to give the gentlest manipulation of muscles and joint movements so that further injury is not inflicted. Gentle faradisation, with a roller electrode to assist in maintaining nutrition of the muscles, is the best and most convenient form of electricity. If galvanism is used it should be restricted to the nutritional aims. Any attempt to galvanize the brain is a waste of current.

When the time has come for exercise, guard the patient closely to prevent fatigue, both of the nervous and the muscular systems. The diet should be simple but highly nutritious, consisting of such foods as are easily digested and leave but little residue.

When the state of the barometer is a possible factor in the hemiplegic condition, a suitable climate, one free from violent changes, is the one to be chosen.

The environment of the patient must be considered in the after-treatment, and should be selected according to the habits of the individual.

The post-hemiplegic complications, athetosis, aphasia, paresthesia, tremor, convulsions, and emotional states call for no special comment.

Contractions may be modified by apparatus or tenotomy. Drobnik suggests the transplantation of muscles, i. e., stitching of the tendon of the sartorius, for instance, into the tendons of a paralyzed group.

SOME OBSERVATIONS UPON CORNEAL ULCERATION OCCURING IN THE SENILE AND DEBILITATED

By H. McI. Morton, M. S., M. D.

MINNEAPOLIS

When occurring in the robust individual simple ulceration of the cornea usually runs its uncomplicated course to a rapid recovery. Such, however, is not the rule in the aged and debilitated. There are in these cases certain departures from the usual that render the disease more interesting, and frequently more serious. The cornea of the healthy child or adult is a poorly supplied structure at best, and the added factors of advanced age and malnutrition cause radical departures from the usual course of the disease that should be appreciated by the attendant when the case first presents itself. The clinical picture in many cases is not the shallow central area of ulceration with a sharp line of demarcation and clear area of corneal tissue surrounding, but a marginal—usually the upper margin involved—ulcer, shallow at one side and with decided deepening of the other, this latter edge having a decidedly annoying tendency to advance both forward as well as downward into the cornea. The floor is usually covered with debris, or, as in most cases, with an absolute slough, and with considerable cloudiness about the diseased area. There is usually comparatively little conjunctival-bulbar inflammation, and the pain is much out of proportion in its severity, although in certain cases little or no pain is appreciated. The characteristic feature is an obstinate chronicity with decided tendency to extend into the proper substance of the cornea. If this tendency is not controlled promptly, hypopion-keratitis is very prone to occur. If the case has progressed thus far, the condition in this class of cases is an exceedingly grave one, both as regards vision and the safety of the globe, itself, since the Saemisch incision or other operative interference are illy borne. The danger of panophthalmitis is then imminent.

This brief resumè of the common course of corneal ulceration in the old and feeble, when no treatment or improper treatment is instituted, indicates at once the imperative necessity of dealing with the disease in a radical and prompt manner. This we find in the use of the galvano-cautery. Prompt cauterization of the floor and rim of the ulcer, including the area immediately in front of the advancing edge, is indicated, is safe, and is usually prompt in staying the extension of the process. In addition to this effect, the reaction following the use of the cautery, which is usually slight, gives the needed stimulus to the process of repair. After this procedure the use of formalin (1-100), applied directly to the area after staining with floureslin, and the use of a weak cocaine solution, or the direct application of silver nitrate (gr. xx to f℥i), is indicated. Protargol (gr. xx to f℥i), and nargol in 10 per cent solution when applied to the everted lid, are of benefit in these cases, and their use a routine measure in my office. While atropine is, in my judgment, an unrivaled drug in ulceration of the cornea, when used with care, and is beneficial in the senile ulcer, it must in such cases be used with added caution due to the danger of increased tension or the precipitation of an actual acute glaucoma.

Complicating diseases of the lachrymal apparatus should have attention, and the nose sprayed with a cleansing solution followed by a watery solution of tannic acid. At home the patient should use hot fomentations hourly, followed by the instillation of warm saturated boracic solution. The one important act, however, is the early use of the cautery, and this fact cannot be too strongly emphasized when we are dealing with a corneal ulcer of this character.

It is also to be observed that slight traumatism of the cornea in the old patient is very prone to repair slowly, or to be followed by an ulcerative process. After such injuries the injured area is transformed into an infected ulcer with a muddy colored base. The attendant who at once recognizes the serious import of this peculiar muddy-colored ulcer does his patient excellent service, and especially if he carefully, but not too sparingly, applies the cautery. Many of these cases I have observed run into a hypopion-keratitis and panophthalmitis, where the usual means of treatment applied to simple non-complicated ulceration in the robust individual, was instituted. It must be understood that I have no reference to the distinct type of corneal disease known as serpigenous ulcer, but solely to the fact that ordinary ulceration in the senile has a chronic and more distinctive tendency than in the young and the robust. This I assume is due to the lowered vitality of an already poorly nourished structure, rather than to any special bacterial influence. It is a routine practice with certain practitioners to treat all forms of corneal ulceration with the cautery and in past times had been with me for a few years My experience persuaded me that such indiscriminate use of the cautery was not alone unnecessary, but not good practice. Many simple ulcerative processes involve so little of the proper substance of the cornea, or are confined so entirely to the epithelium, that they heal by the aid of rest and very simple remedial measures. The use of the cautery in these cases is indisputably attended with a denser and more noticeable scar than would follow the normal process of repair. There is not that lowered vitality and inability to repair which we find present in the aged, and which need both the aid that comes from the bacterial destruction, but as well the slight reaction that supplies the needed aid to repair. While the subject of corneal ulceration is indeed commonplace, I feel that a brief attraction of attention to this phase of the disease is of such practical importance to the practitioner as to need no apology for these observations.

Quality and not quantity must be the watchword of a dignified medical journalism, as of a dignified lay journalism.—Boston Med. and Surg. Jour.

REPORT OF A SCARLET FEVER EPIDEMIC

By E. D. Harrington, M.D.,

CLOQUET, MINN.

During the recent scarlet fever epidemic at Cloquet, Minn., I was appointed inspector by the state to take charge of the quarantine at that place. It was my duty to make a thorough inspection of the village, and enforce strict quarantine.

I wish to report forty cases, with eleven deaths, making a mortality of 27½ per cent. As I had nothing to do with the treatment of these cases, it will be impossible to give in detail the history of each case, but I can give a general outline as to the character of the epidemic.

It will be seen by the accompanying chart that the infection was a severe one, death occurring early in the disease with one or two exceptions. Case No. 13 was taken suddenly sick in the forenoon, and died at two o'clock in the afternoon of the same day, after having several convulsions; no eruption appearing on the body. Case No. 40, when seen, was very restless, rolling back and forth in her bed, constantly chewing her tongue; severe diarrhea was present. In a number of cases there was considerable glandular involvement.

Nephritis was a frequent complication. In just how many cases albumen was present I am not able to say, as I was unable to get a report from every case. In some the edema was quite marked about the face and ankles.

The coryza and bronchial irritation were very annoying features throughout the epidemic.

Besides the epidemic of scarlet fever there was an epidemic of measles, and in two or three instances both diseases existed in the same family at the same time. There were no fatalities reported from the measles. Below will be found the cases tabulated as to age, sex, etc.

TABLE OF CASES

No.	Age.	Sex	Complications.	Result.
1	2½ years	M.	Albuminuria, Pneumonia	Recovery.
2	2½ years	F.	Multiple Abscesses	Died 21st Day.
3	17 months	M.		Died in 40 hours.
4	8 years	M.	Albuminuria	Recovery.
5	5 years	F.	Otitis Media	Recovery.
6	2 years	M.		Died 7th Day.
7	8 years	F.	Otitis Media	Recovery.
8	18 months	M.		Died 2d Day.
9	5 years	F.		Recovery.
10	21 months	M.		Died 2d Day.
11	12 years	F.		Recovery.
12	7 years	F.	Albuminuria, Bronchitis	Recovery.
13	4 years	F.	Convulsions	Died in 5 hours.
14	8 years	F.		Recovery.
15	5 years	F.		Recovery.
16	13 years	M.		Recovery.
17	12 years	M.		Recovery.
18	6 years	F.		Died 3d day.
19	13 years	F.	Otitis Media	Recovery.
20	10 years	M.	Albuminuria (glandular involvement)	Recovery.
21	6 years	M.	Otitis Media	Recovery.
22	4 years	M.	Glandular involvement	Died 7th Day.
23	4 years	F	Glandular involvement	Recovery.
24	3 years	M.	Glandular involvement	Recovery.
25	4 years	F.	Otitis Media	Recovery.
26	2½ years	M.	Glandular involvement	Died 8th Day.
27	7 years	M.		Recovery.
28	4 months	F.		Recovery.
29	5 years	M.	Otitis Media	Recovery.
30	13 years	M.		Recovery.
31	8 years	M.	Glandular involvement	Recovery.
32	8 years	M.		Recovery.
33	2½ years	F.	Bronchitis	Died 2d Day.
34	7 years	F.	Otitis Media	Recovery.
35	5 years	F.		Recovery.
36	9 years	F.		Recovery.
37	9 years	F.	Albuminuria	Recovery.
38	5 years	F.	Otitis Media	Recovery.
39	3 years	M.		Recovery.
40	3 years	F.	Severe Diorrhea, No control over bowel or bladder	Died 2d Day.

INFLAMMATION OF THE PELVIC CONNECTIVE TISSUE*

By J. H. Rishmiller, M. D.

MINNEAPOLIS

After looking over the literature on the inflammatory conditions involving the pelvic connective tissue and peritoneum, an impression is left upon the mind of the existence of a conspicuous discrepancy. The pelvic peritoneum is structurally a modified form of the underlying connective tissue, and it would seem almost unwise, clinically, to draw a hard and fast line between their pathological relations.

The older authors have written most excellent treatises on cellulitis, especially the pioneer, Marion Sims, and our esteemed Thomas Addis Emmet. These two men have accomplished more towards the advancement of the alleviation of woman's suffering than all the modern enthusiasts.

Some gynecologists would have us believe that inflammation of the pelvic connective tissue is rarely encountered. In times past all pelvic inflammations were regarded as cellulitis; then a reaction set in, and it was all peritonitis, and at present it is almost exclusively salpingitis. The latter designation appears to me just as injudicious a conclusion as to call every pelvic inflammation cellulitis. Cases have been reported where large pelvic abscesses have formed in the pelvic connective tissue of the male while the peritoneum wasentirely free, consequently the exclusive salpingitists of to-day certainly cannot say that the cause comes from uterus, tubes, or ovaries.

Certain parts of the pelvis are more liable to injury and contain a larger amount of connective tissue than others. This is especially true of the broad ligaments, the surroundings of the lower uterine segment (particularly the lateral), the fornix of the vagina, and the uterosacral ligaments.

Acute inflammation of the pelvic connective tissue is rare in childhood, and rarer after the menopause. It is chiefly confined to the age of sexual maturity, and particularly to the puerperal state. The inflammation may also be due to any of the operations on the cervix and uterus, or to the presence of a hematoma, and so forth. All these cases are due to infection, and the progress depends on the different kinds of micro-organisms at work. Furthermore, the route of infection depends also upon the variety of the organism. The gonococcus of Neisser is universally regarded as traveling along the uterine mucosa to the Fallopian tubes, although in some instances it may pass into the submucous connective tissue and even enter the circulation, as shown in cases with gonorrheal rheumatism. The streptococcic infection concerns us mainly, and as there is now an acrimonious controversy as regards the route of invasion and structures involved, I wish to quote Dr. Howard Kelly: "When streptococci gain entrance to the uterus, they may invade the pelvis by the same route as the gonococci, or they may penetrate the uterine wall, setting up an endometritis or metritis, and then a parametritis, forming a more or less dense swelling, which usually terminates in an indurated phlegmon or a pelvic cellular abscess. The tube and ovary may then be involved by continuity or by blood infection, or they may escape infection and lie upon the top of the abscess intact."

It is the concensus of opinion that the streptococci spread by following the lymphatics and veins from the uterus, while the gonococci invade the pelvis by continuity of the mucosa.

You will grant that gonococcic infection is far more prevalent than any other microbic invasion. In twenty-five cases of pelvic abscess evacuated per vaginam in Dr. Kelly's clinic at Johns Hopkins, the cultures were negative in twelve cases, the gonococci were found in four cases, the colon bacillus in four cases, the streptococci in three cases, the staphylococcus pyogenes aureus in two cases, and the staphylococcus pyogenes albus in two cases.

Inflammation of the connective tissue essentially belongs to septic processes, in which putrefactive organisms predominate. The gravest forms come from the metritis of abortions and labors, as the enlarged uteri are, in the pregnant state, abundantly supplied with lymphatics. The commonest seat is the broad ligaments. At first the staphylococci and streptococci travel along the lymphatic vessels until they become choked, after that they are carried by the veins.

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*Read before the Hennepin County Medical Society, May 5, 1902.

The inflammation consists of a serous exudate and active cell-proliferation in the meshes of the connective tissue. Its tendency is towards resolution, but should an overwhelming number of inflammatory corpuscles form, it may pass into suppuration. It is generally circumscribed, but should the initiative lesion be of a virulent type, then it usually appears as a diffuse infiltration, extending along the upper borders of the broad ligaments, the course taken by the lymphatic vessels as they emerge from the uterus. Connective-tissue inflammation, owing to improper asepsis, in conjunction with the lacerations of the cervix uteri and the upper part of the vagina, may lead to suppuration or result in connective-tissue increase with subsequent organization and sclerosis.

The symptoms are much like those of peritonitis or inflammation of the uterine appendages. The patient may have a chill, an accelerated pulse, a rise in temperature, loss of appetite, furred tongue, pain in lower part of the abdomen, and frequently rectal or vesical tenesmus. There is little tendency to vomit, and no tympanites, both so characteristic of peritonitis. On bimanual examination we detect considerable tenderness. If the broad ligaments are the seat of inflammation we feel a doughy exudate, varying in size from a walnut to an apple. If the utrosacral ligaments are affected we feel the semi-lunar fold of Douglas's pouch, sensitive and swollen. Occasionally we find the connective tissue involved behind the cervix or between the bladder and lower uterine segment. Frequently we have, after the subsiding of the acute symptoms, to contend with an irritability of the bladder. This condition is referable to a retraction of the uterosacral ligaments, thereby indirectly pulling on the base of the bladder. This shortening of the uterosacral ligaments is invariably followed by retroversion of the uterus. Decided contraction of the uterosacral ligaments may be the prime factor in gradually producing an obstructive constipation. An unusual case in question was one referred to me by Dr. Morton some six years ago, where, upon examination, the rectum was found to deviate towards the right, and was then encroached upon by the shortened and thickened right uterosacral ligament in such a manner as almost to produce a rectal occlusion. Her history revealed a prolapsus recti of about four inches when the patient was two years of age. This was reduced by her mother, and all went well until two years before I saw her, when an insidious torpidity of the large intestine had compelled her to resort to therapeutic measures, and finally to seek surgical relief.

Pelvic peritonitis, most commonly the result of tubal disease, may very easily be mistaken for cellulitis. Cellulitis is less grave, and is commonly unilateral or asymmetrical. In peritonitis the exudate is more likely to be circumuterine, and to hold the uterus in the median line, while the inflammatory exudate in the connective tissue of the broad ligaments, will push the uterus to the opposite side. This lateral displacement is reversed, and, as the exudate is absorbed and the broad ligament contracts, the uterus is ultimately anchored to the side where the inflammation first started. A perimetritic exudate may also lie between the posterior vaginal wall and the rectum as a transverse cylindrical mass, and tend to push the vaginal wall before it. Should there be both a pyosalpinx and an exudate, one will detect from below the above-mentioned cylindrical tumor, and from above the adnexial pus as a spherical swelling.. One will not examine many patients without encountering convincing evidence of the frequent existence of the foregoing conditions.

A pyosalpinx or a pyo-ovarium seldom ruptures externally without first implicating the connective tissue in its immediate proximity. These intraperitoneal suppurations most frequently rupture into the rectum, less often into the vagina, and rarely into the bladder. A connective-tissue abscess is low down, and usually bulges into the vagina, pressing the cervix against the bladder or to either side. Rectal examination shows the pus accumulation below the uterosacral ligaments, while the intraperitoneal abscess is detected on either side or above the uterosacral ligaments. A pyosalpinx and pyo-ovarium push the body of the uterus more, and the cervix less, out of place, and seldom extend low down.

Much depends upon the course of surgical interference whether we have to deal with a pelvic abscess of the connective tissue with an intraperitoneal accumulation. Formerly there were many cases of unsatisfactory closing up of fistulous tracts and apparently inexplicable results when all collections of pus in the pelvis were simply opened and drained through the vagina. It was the celiotomist who ultimately directed our attention to extirpating pyosalpinxes for the reason that the tube is lined by mucous membrane, and that chronic suppuration of mucous surfaces, even with thorough drainage, is most intractable. On the other hand, a pelvic abscess surrounded by connective tissues, when incised, irrigated, and drained, is apt to close spontaneously.

The surgeon must be his own mentor in regard to the prosecution of the plan of treatment, or, in the advanced stage, of the surgical technic, in order to treat with discretion these devious inflammatory invasions of the binding tissue of the pelvic organs. *Ubi pus ibi evacua.*

PATHOLOGICAL SPECIMENS WANTED

The Committee on Pathologic Exhibit for the American Medical Association is anxious to secure materials for the coming session at Saratoga, June 10th to 13th, inclusive.

This exhibit was accorded much praise and comment during the sessions at Atlantic City and St. Paul, respectively, where were collected valuable exhibits from all parts of the country. The materials included not only pathologic specimens, but the allied fields, bacteriology, hematology, physiology and biology were well represented.

It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges.

This exhibit has already become a permanent feature of the annual sessions of the American Medical Association, and the committee is desirous of securing its list of exhibits as early as possible, and to this end asks those having desirable materials to communicate with any member of the committee.

To contribute to the value of the work, it is suggested that, as far as possible, each contributor select materials illustrative of one classification, and by such specialization enhance the usefulness of the display.

Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the committee and due credit will be given in the published reports.

F. M. Jeffries,
214 E. 34th St., N. Y. City.
W. A. Evans,
103 State St., Suite 1403, Chicago, Ill.
Roger G. Perkins,
West. Res. Med. School, Cleveland, Ohio.

STRABISMUS

If we are to obtain the best results in the treatment of strabismus, either manifest or latent, we must bring to bear a knowledge of the physiology of the muscles and nerves in general, for an insufficiency or weakness of an ocular muscle differs in no particular in a physiological way from an insufficiency or weakness of any other voluntary striated muscle; for it is a well-established fact of physiology that the nerve-cells give out before the muscles. "It is undoubtedly of advantage to the body," says Warren P. Lombard, "that the nerve-cells should fatigue before the muscles, for the muscles are thereby protected from overwork."

Now, in an insufficiency or weakness of any ocular muscle, the specialist—the ocular-muscle specialist, in particular—is prone to forget this general and most important physiological fact, and begins to treat the muscle itself locally by prescribing prisms or performing graduated tenotomies of the opposing muscles, or some other equally absurd procedure; failing to recognize that it is the nerve-cells which are fatigued, weak and at fault and in need of treatment. And this treatment, in the main, should be through increased nutrition, by means of tonics, rest, outdoor exercise, and by local treatment. The local treatment should consist of the proper correction of the error of refraction, and by having the patient turn the eyes forcibly in the direction of the weak muscle or muscles several times a day.—Jour. Am. Med. Asso.

EFFECT OF LEGALIZING OSTEOPATHY.

Legalizing osteopathy is really only a scheme for practicing medicine by a short cut. Every man who has not got the time, the endurance, the brain, to enter the regular medical profession in the regular way, and who wishes to be a fake practitioner of some kind or other, will take this method of getting a license.—The Post Graduate.

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MAY 15, 1902

HONEST, BUT INNOCENT

The St. Paul Medical Journal for May contains the following editorial:

> While, as we have frequently stated, it is the policy of the St. Paul Medical Journal to keep its reading pages free from advertising matter, we are occasionally imposed upon. We were imposed upon recently, but discovered the fraud in time to spare our readers. We received, for publication in this month's issue, an article by a physician in Missoula, Mont., and as it was well written and as we supposed it to be intended solely for publication in this journal, we had it set up and expected to publish it, in spite of the fact that it mentioned, as the chief method of treatment used in a common disease, a certain proprietary remedy. The preparation mentioned is one in common use, and we supposed the writer to be sincere in his mention of it. Fortunately, we received the belated April issue of a journal published in a neighboring city, and saw there printed exactly the same article which we already had in type for our May issue. We could not doubt but that the writer had been hired to write the article by the manufacturers of the preparation mentioned, and we at once killed the article and wrote him that no further communications of his would receive any attention at our hands. We call attention to this circumstance as an illustration of how easily an honest medical journal may be imposed upon, and how important it is to know something of the writer of a paper before accepting it.

If the editor of the Journal will examine his exchanges a little more carefully, he will find the same article in others than the "belated" one from "a neighboring city." The wonder is that the astute editor of the Journal did not see fraud written on the face of that article. It was submitted to the Lancet several weeks ago, and at once refused, because we believed it to have been written expressly for the purpose of advertising the remedy named in the prescription given by the author.

It is difficult to understand how a physician can be hired to write such articles, and to perpetrate the fraud required to get them into one medical journal, to say nothing of "the imposition" of sending the same article to several journals to appear simultaneously, each editor being left to assume that the article is written exclusively for his paper.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION

Saratoga is so well equipped for the care of large conventions that no one need worry about securing accommodations, yet it is as well to reserve a room at a satisfactory hotel several days before June 10, and thus avoid the rush and inconvenience of the late arrival. The railroads have reluctantly granted a rate of a fare and a third on the certificate plan, with an extension time limit to July 2. Those who begin their return journey after June 16 will be charged a fifty-cent fee extra.

Undoubtedly the meeting this year will be of unusual interest on account of the proposed changes in the constitution and by-laws of county and state societies. The parliamentarians will be out in full force, for there is nothing a doctor likes so well as a bit of a scrap remotely related to medicine. When the change has been made and the House of Delegates assumes control of the politics and business of the association, much more time will be at the disposal of members for scientific advancement in medicine.

The environs of Saratoga offer varied forms of recreation for the worn and weary medical man. He will undoubtedly give himself the pleasure of clearing out his uncertain digestive tract with all kinds of mineral waters, that he may applaud himself and inform his friends that he has been to the "springs" for his health. There is no doubt that he will drink all kinds of waters regardless of their composition as long as they manifest their activities through the proper channels. If the doctor is wise he will run up to Lake George and Lake Champlain for an outing, that he may contrast the scenery of that wonder-spot with the beauties of the lake regions of the Northwest. If he is of the right sort he will gravely announce that there is no country more beautiful than that in which he resides, even though the hotels are more commodious and expensive.

At all events the average man will embrace all the opportunities for sight-seeing, medical knowledge, mineral waters, smoking, eating, the consumption of new varieties of dust, bacteria, and other things which are supposed to undermine the health of the people.

At the same time, with the change of scene and the absence of complaining patients, he will return to his practice tired from travel, but brighter, fresher and ready for the usual work.

THE PROPOSED CHANGES IN THE A. M. A. CONSTITUTION

If the county societies and state associations carry out their part in the proposed plans of the A. M. A., the society will become the greatest medical organization in the world. Each county in the state is urged to form a county society which will embrace all who are legally qualified to practice medicine. If two societies are projected they are advised to settle their differences, if any exist, and unite in the spirit of medical friendliness. If a county is too sparsely settled to organize a society, the committee suggest that physicians become members of a society in an adjoining county, and, if necessary, several counties may unite under a hyphenated name. Each county society is entitled to one representative in the state association for every one hundred members or the fraction thereof, so as to make the legislative body as small as is consistent with conditions and to prevent large societies from the controlling interest in the legislative body.

The committee also advise the formation of a "council" in the state association, to be composed of men from various parts of the state, who will represent a district over which they may exercise the duties of a censor to settle disputes, and to organize societies in unrepresented counties, and to form a part of the House of Delegates in the state organization. Charters are to be issued to the county societies, and an assessment of two dollars per capita is advised.

When the machinery is in running order our state association ought to have a large membership. At present there are in the neighborhood of four hundred members. Under the new order of things, and before many years, the membership should be about two thousand. To belong to a recognized and chartered county society is to be a member of the American Medical Association. The necessity for a perfect machine is very evident, and to reach that state of perfection each man must do his part in the construction of the organization.

The whole purpose of this organization and its branches is, "with the view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

No better creed could be promulgated for any body of men, and, if lived up to, it will put the profession in a position to advise its law-makers and be assured that the advice, emanating from the representatives of so powerful an organization, will be respected.

When the meeting of the state association takes place next month the attendance should be large, that the results of the committee of the A. M. A. may be considered and adopted.

The question of entertainment of the state association may become a trying problem. Undoubtedly the resolution adopted at the Duluth meeting will be enforced, i. e., that each man pay his pro rata share of the expense of the general entertainment. This can be made so easy that no one will feel burdened by the additional dollar. In all of the eastern organizations each man pays for his own plate if he attends a banquet, otherwise he chooses his own form of entertainment. The average man likes an informal time, and will go a long way if he is assured that his evening will not be stiff or formal.

The report of the committee on reorganization for the state association will be presented on the first day of the session, and, if adopted, the remainder of the session will be in conformity with the new constitution.

The executive committee of the state society will mail a copy of the proposed constitution to each member of the society during the coming week.

In this issue of the Lancet the president of the state society, Dr. W. A. Hall, gives a list of the committees.

In the issue of June 1 a preliminary program of the coming meeting will be published, and all papers or titles should be in the hands of various chairmen by May 24.

MINNESOTA STATE MEDICAL SOCIETY

Officers, Delegates and Committees for 1902

PRESIDENT

William Asbury Hall, M. D.

First Vice President

J. P. Humes, M. D.

Second Vice President

J. D. Simpson, M. D.

Third Vice President

S. S. Reimstad, M. D.

CENSORS

F. A. Dunsmoor, M. D.	Expires in 1904
Walter Courtney, M. D.	Expires in 1904
A. W. Abbott, M. D.	Expires in 1903
A. C. Wedge, M. D.	Expires in 1903
J. Ohage, M. D.	Expires in 1902
W. L. Beebe, M. D.	Expires in 1902

Chairmen of Sections

MEDICINE

L. A. Nippert, M. D.

SURGERY

J. W. Andrews, M. D.

Hygiene, Medical Education and Public Medicine

W. S. Fullerton, M. D.

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A. W. Abbott, M. D.

Alternate Delegate

Parks Ritchie, M. D.

MEMBER OF THE COMMITTEE ON LEGISLATION OF THE AMERICAN MEDICAL ASSOCIATION

H. M. Bracken, M. D.

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Executive Committee

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C. H. Hunter, M. D.
R. O. Beard, M. D.
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T. S. Roberts, M. D.

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Talbot Jones, M. D.; Chairman.
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Thos. McDavitt, M. D.
J. L. Rothrock, M. D.
R. J. Hill, M. D.

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A. C. Taylor, M. D.
A. J. Stone, M. D.
Franklin Staples, M. D.

COMMITTEE ON MEDICAL LEGISLATION

(To Serve Two Years.)

J. B. Brimhall, M. D., Chairman.
R. O. Beard, M. D., Secretary.
J. W. Andrews, M. D.
E. Y. Chilton, M. D.
William Davis, M. D.
C. L. Greene, M. D.
R. J. Hill, M. D.
R. N. Jackson, M. D.
Thos. McDavitt, M. D.
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B. J. Merrill, M. D.
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A. F. Groves, M. D.
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W. A. Jones, M. D.
J. W. Macdonald, M. D.
W. J. Mayo, M. D.
J. B. McGaughey, M. D.
S. M. Stocker, M. D.
C. G. Weston, M. D.
H. H. Wilcox, M. D.

COMMITTEE ON REVISION OF THE CONSTITUTION AND BY-LAWS

William Davis, M. D., Chairman.
J. B. McGaughey, M. D.
Thos. McDavitt, M. D.
C. A. Stewart, M. D.
W. A. Hall, M. D.,
Ex.officio.

CORRESPONDENCE

NEW YORK LETTER

New York, April 25, 1902.

Editor Northwestern Lancet:

After some days' wandering among the New York hospitals, I feel in rather a self-congratulatory state of mind, rejoiced to find that our Minneapolis surgery seems quite on a par with that done here as to technique and results, and rejoicing also that the medical department of the University of Minnesota is so well thought of, that our alumni are so creditably represented among the New York hospital internes by Dr. Welles and Dr. Hartsorn(of the class of '98. From observations in my student days I know how difficult it is for a graduate of other schools to obtain a hospital position in New York, and that much credit must be given to Dr. Hartsorn and through him to the University Medical Department for his success in securing a surgical internship at Roosevelt Hospital in competotion with thirty first-class men, mostly the crack students from the New York schools.

Through Dr. Hartsorn's courtesy I have been able to get a very good idea of the work at Roosevelt Hospital, and I find it about the same as our better work at home. I attended a very interesting series of operations at this hospital in the magnificent operating-rooms of the Syms Pavilion, and was glad to renew an old-time acquaintance with that brilliant surgeon, Dr. Wm. T. Bull.

Nitrous oxide gas, followed by ether, seems to be the invariable anesthetic used here, although I saw one operation under chloroform, a mouth case. One well-known surgeon explained this quite tersely by saying that he presumed as many died from ether as chloroform narcosis, but "they died decently in their beds in a day or two, and not on the table."

I was greatly interested in two of Dr. Bull's operations. The first was Edebohl's operation for chronic nephritis in a man who had suffered for several years with chronic Bright's and general anasarca, having been tapped several times. He was given ether, placed in a prone position, and each kidney attacked simultaneously by a separate surgeon and his assistants. The kidneys were exposed by a vertical incision, brought rapidly into the wounds, their capsules incised, separated, and completely removed, after which hemorrhage was checked and the wounds sutured. Time of operation, twenty minutes; and this was extended by the high position of the left kidney.

This operation was looked upon as a purely experimental one, the surgeons wishing to obtain data to confirm or refute Edebohl's views. The general opinion here, as I have heard it expressed, is that it will take a great deal of new evidence to establish this procedure as of any value. The immediate bad effect of the anesthetic and the handling of the kidneys seem also undetermined.

Another operation was perineal prostatectomy upon a small prostate with an obstructing middle lobe. Dr. Bull made a transverse incision, easily reached the prostate, and enucleated it, both lateral lobes peeling out readily, but the middle lobe required an incision from the bladder side before the obstruction was removed. Dr. Bull used no special instrument to either pull or push down the prostrate, and had little difficulty in reaching its upper limit.

Another operation was of interest from its magnitude and the previous failure of lauded methods of treatment. An epithelioma of the inner side of the lower lip and floor of mouth had been treated three months previously by an extirpation of both external carotids, with the result of slight shrinkage and retardation of growth for the first month, after which it progressed at about its former rate. Next the X-ray was thoroughly applied without any noticeable effect, so that, as a last resort, the case came to operation, although hope of cure had been denied before the carotid operation was done. The operator, Dr. Blake, did a thorough dissection of the submaxillary triangles on both sides, then removed the lower jaw as far back as the second molar tooth on both sides, and with it the attached muscles and floor of the mouth. The hemorrhage was extreme, considering the previous carotid ligation. The tongue was sutured to the mucous membrane of the lip and cheek, thus excluding the mouth from the wound, but this was not enough to prevent the tongue's dropping back and choking the patient, and therefore a tracheotomy was done.

The purely palliative procedure will probably give the patient a year of comparative comfort.

One procedure, which seems quite popular here, was rather a surprise to me, and that was the frequent use of the aspirator. Some of the orthopedists who believe in interfering with tubercular abscesses, use this instrument regularly to empty the abscesses, and repeat the procedure as often as the cavity refills, and they claim quite good results. This has undoubtedly its advantages, but when extended to true abscesses with affusion pus on the ground of "preventing the bad smell" that would result from drainage, it seemed to rather have exceeded its usefulness.

I hope to be able to write you soon of the interesting cases which can be studied among the profusion of material at the Hospital for the Ruptured and Crippled.

Sincerely,

J. Clark Stewart.

REPORTS OF SOCIETIES

HENNEPIN COUNTY MEDICAL SOCIETY

A stated meeting of the Hennepin County Medical Society was held in their rooms in the Andrus building, May 5, 1902, President, Dr. H. L. Staples, in the chair.

Dr. Staples wishes to correct an error in the minutes of the previous meeting, saying that he had not used veratrum in cases of pneumonia.

Dr. Hill, chairman of the committee to revise the by-laws and constitution, offered the following changes:

CONSTITUTION

ARTICLE III

Section 2. Resident members shall consist of physicians and surgeons who, having been residents of Hennepin County for six months, shall have been regularly elected, paid the initiation fee, and signed the Constitution and By-Laws.

ARTICLE V

Section 2. Stated meetings shall be held on the first and third Mondays of each month, the last meetings in June and December being reserved for the annual and semi-annual meetings.

ARTICLE VI

The officers of the society shall consist of a President, Vice-President, Secretary-Treasurer, Librarian, five Censors and a committee of three resident members, who, with the President and Secretary-Treasurer, shall be called the Executive Committee.

They shall hold office for one year, except the Secretary-Treasurer, who shall be elected for three years, and until their successors shall be chosen.

ARTICLE VII

Section 4. It shall be the duty of the Secretary-Treasurer to keep a full record of all the transactions of the society; a list of all the members with the date of their admission; a record of the members in attendance at each meeting.

He shall send notices of all meetings to all resident members of the society at least five days previous to the time such meeting is to be held, when practicable.

He shall be entitled to draw an annual salary of $50.00.

BY-LAWS

Section 1. Every resident member shall pay into the treasury an annual sum to be determined by the society at the stated meeting succeeding the annual meeting. New members shall pay an initiation fee upon signing the Constitution, which shall be received in full of all dues up to the next annual meeting.

Applications for membership were as follows: Isaac Beach (honorary member, of St. Anthony Park), H. A. Cone, J. Callighan Cummings, Adolph E. Loberg, Dr. Suderland.

These were referred to the Board of Censors.

The regular program was then continued. Dr. Morton read his paper, entitled "Ocular Expressions of Renal Diseases." Dr. Todd opened the discussion by saying:

"Dr. Morton has so thoroughly covered the subject that he leaves little room for discussion. My limited experience corresponds with that of others, and I have found as a rule that death takes place within a few months and rarely later than a year after typical albuminuric retinitis becomes manifest, excepting in puerperal cases.

"It is of great importance to make a diagnosis by the use of the ophthalmoscope of the earlier changes in the fundus of the eye, which precede the more severe form of the albuminuric retinitis, for in such cases we may be able to prolong the life of the patient, and it is a good custom to examine the fundus of every patient who comes to us for examination of the eyes, whether for an error of refraction or disease, and whenever the fundus appears the least bit suspicious, the urine should be examined.

"I am glad the doctor called attention to the influence of gout and rheumatism upon ocular affections. These diseases are certainly responsible for many eye diseases."

Dr. Murray said:

"We have listened to a very interesting paper this evening by Dr. Morton, and I think this is an eye subject that is so closely related to general medicine that it should be of interest to all medical men. I was glad to hear Dr. Todd mention the fact that we do not find the characteristic appearance in the fundus lesion in all of these cases. While text-books would lead us to believe that in the great majority of cases the fundus lesion will show this characteristic appearance in the region of the macula, it has not been my experience to find it so. We see a good many of these cases in the earlier stages of fundus lesion, and these cases are more likely to show changes due to circulatory disturbances, changes that are the result of an arterial sclerosis, the small contracted retinal arteries and the irregularly dilated veins. The fundus lesion may be, and in well marked cases generally is, in the neighborhood of the macula, but the lesion may be confined to the retina, it may be confined to the nerve, or it may involve both.

"The subject of uremic amaurosis brings up the interesting subject of the pathology of this condition, which is very obscure, for instance, in cases of complete uremic amaurosis, occurring during pregnancy; the presence or absence of the pupillary reflex is not at all constant, showing in the former case that the lesion is higher up than the pupillary center in the corpora quadrigemina, and in the latter case that it is anterior to it, or involves both portions.

"The subject of prognosis in connection with the cases accompanying chronic nephritis is of considerable value, and I believe the statistics given by the writer are correct, that about 75 per cent of these cases die within a year, and a majority within six months."

Dr. Rishmiller then read his paper, entitled "Inflammation of the Pelvic Connective Tissue."

Dr. Abbott, in discussing the paper, said there were one or two practical points in the paper which he wished to refer to, namely, the distinguishing points between peritonitis and cellulitis. Peritonitis, he stated, is almost always a result of an extension of an infectious inflammation of the uterus or a tube. Cellulitis is primarily due to traumatism of some sort, such as arises from the use of instruments or other injuries during parturition. He stated that it is astonishing how large an abscess will form in the broad ligament. He remembered one case where it extended nearly to the umbilicus. It was opened near the anterior-superior spine. In some cases infection may extend from the field of operation, as in hernia or Alexander's operation. He thought another distinguishing point in cellulitis was the large number of abscesses found. He had opened as many as sixteen in one case. Cellulitis should be looked for after traumatism to the pelvic tissue.

Dr. Rishmiller closed the discussion by saying that he thought it hard to detect the multiple abscesses. He thought it well to open them posterior to the cervix, to produce thorough drainage. He saw a case last Saturday in which he could not detect fluctuation before or after giving an anesthetic. An opening posterior to the cervix emptied a small pus cavity below the uterovesical ligament.

Dr. W. A. Jones then read a paper, entitled "Forms of Hemiplegia with Treatment."

Dr. Nippert, in discussing the paper, wished to emphasize the danger of using digitalis in heart lesions, such as aortic or mitral stenosis, and that it is necessary to keep the heart as quiet as possible.

Dr. Chapman said he thought we were apt to think of hemiplegia as producing a serious disturbance of the nervous system. He wished to emphasize the point that this is not always so He was recently mistaken in a diagnosis. It was a case which he had treated for a few years for dyspepsia. The patient had had some mild symptoms at various times, and one morning was suddenly taken ill. He had no loss of consciousness and his mind was clear. He thought this was another attack of dyspepsia. While there was no paralysis in the beginning, it occurred later in the facial muscles, and grew worse each day. The patient recovered after a few months' illness.

Dr. Morton thought there were ocular symptoms present in some of these cases. One patient, whom he treated for a year, had marked hemiplegia. Hemianopsia was sharply defined, but there was no loss of pupillary reflex. This man improved, and is now in the South. There is no change in the field of vision, but no improvement in hemianopsia. Hemiplegia does improve in certain cases, but hemianopsia does not.

Dr. Haggard wished to consider one point of importance in certain cases, that is of cerebral hemorrhage. He recalled a case in which there had been precipitate labor, the child dying from cerebral pressure.

Dr. Weston said there were one or two points which were not clear in his mind. One was the early treatment. He wished to know what class of treatment to start the early cases in. The essayist had mentioned 47 or 48 hours. He thought if the head was raised a little there would be less blood-pressure.

Dr. Abbott asked why normal salt solution and cathartics were used. In abdominal operative cases, a salt enema would be followed by a fullness in the bladder, which showed rapid absorption of the fluid.

Dr. Murphy said he had seen two cases of hemiplegia the past year. Authorities were not clear as to what should be used as a sedative He had used morphine in these cases, and both patients had died.

Dr. Reid wished to have Dr. Jones explain a case which he had seen within the last week. In this case there was a slight numbness of the right hand, later of the tongue, and inability to speak for eight or ten hours. For three days his mind would be perfectly clear, he was quiet, and his symptoms would disappear. The patient was a man of about 50 years of age. He had watched this case for two years.

Dr. J. H. Stuart presented the society with a volume of the "Medical and Surgical History During the Rebellion;" a volume of "Operative Surgery," by Pancoast, published 50 years ago, and a "Surgical Anatomy." He said he was very glad to give these books to the society. They were a part of his private library, but he thought they would do more good if placed where the other physicians might have access to them.

Dr. Morton said he had a second volume of "Medical and Surgical History," which he would give to the library. This made the set of histories complete. It was moved and seconded that a vote of thanks be extended to Dr. Stuart and Dr. Morton, and also to Dr. Day, Dr. E. C. Rogers, and Dr. Stuart for other volumes which they had presented previous to this meeting.

REPORT

Dr. Abbott made a motion that the report of the Library Committee be accepted. Officers were then nominated for the ensuing year. Dr. Abbott said he took great pleasure in presenting the name of a faithful and honored member, Dr. J. W. Bell, as president. Dr. Jones nominated Dr. Todd for vice-president. Dr. Sweetser nominated Dr. F. A. Knights for secretary-treasurer, and Dr. Condit for treasurer in case the changes in the Constitution did not unite the two offices. Dr. Head was nominated as librarian. The Board of Censors were as follows: Drs. J. C. Stewart, O. S. Chapman, D. O. Thomas, C. G. Slagle, E. O. Cosman, Jacob Hvoslef and R. J. Hill. The Executive Committee: Drs. Nippert, Strout, Norton, Mann and Weston.

Upon motion meeting adjourned.

THE MINNEAPOLIS PATHOLOGICAL SOCIETY

Arthur T. Mann, M. D., Secretary

Regular meeting, April 21, 1902, the president, Dr. L. B. Wilson, in the chair.

Dr. Thos. G. Lee spoke on the method of teaching embryology as now given in the first and second years at the University Medical School. The problem has been, in part, to so arrange large numbers of serial sections that each individual of a large class may study a complete series of an embryo. There are three series of sections of the embryos of guinea pigs cut in as many planes; i. e., a complete series of sections cut transversely, a complete series cut in the long diameter parallel to the sides of the embryo, and a complete series cut in the long diameter parallel to the front of the embryo. These three series are cut and mounted, and are broken in sets of about forty sections each: and these sets are arranged in the order of the series and marked. Each slide is marked also, e. g., C. F. 24 would be section 24 of the frontal series (F) in the third series (C) of sections. The sets have been made in so large a number that each member of a large class has access to at least one of them at a time, and when each has had time to study his set of 40 slides, and make drawings and notes on them, they are passed along to the next student, and a new set received. In this way each member of the class studies the complete series of sections of the embryo. This makes possible the study of advanced work by the whole class, an advantage which is enjoyed as far as known in all other medical schools only by the few who elect advanced embryology.

Printed sheets are prepared on which each student lists any organs which appear in his sections, and also designates places where the sections show organs or tissues in the most typical manner. The student makes at least four careful and rather elaborate drawings, which represent the best sections in each set of forty slides. This makes it possible for each student to do independent work, and follow out original investigations in the study of his mounted specimens.

Dr. Lee, of the department of embryology, and Dr. Erdmann, of the department of anatomy, are trying to correlate their work so that in one branch the student will gain his knowledge of the microscopical structure of tissue, while in the other branch they study the relations of these tissues in the gross specimens.

Next year problems will be given the students. Instead of selecting the most typical specimens, anatomical problems will be given for them to work out, e. g., to determine the number of segments in the body; to determine the relation of the Wolffian bodies to the Muellerian ducts, and many like problems. The instructors are this year noting interesting problems which arise as the class studies the specimens. These will be arranged for problems another year.

The students so far have been greatly interested, so that it seems that the method will be a valuable aid in teaching the subject.

Dr. A. W. Abbott presented sections of a vaginal band placed from side to side in the vagina, like an incomplete septum. He also presented the specimen of an ovarian cyst.

Dr. A. E. Benjamin presented the specimen removed from what he took to be an extra-uterine pregnancy, operated upon to-day. History: Woman, age 34, has three children, the youngest 4 years old; not pregnant since her last child was born until now; last period, Feb. 25th; ten days overdue; she continued to flow quite hard for two weeks; March 1st severe pains began and lasted for four days; has suffered more or less up to the present, but has been up and about. The patient was first seen March 18. Temp. 101°; pulse 100; very tender; nothing definite made out on examination. The flow stopped about March 28. Examination March 30; all the physical signs of a normal pregnancy in a retroflexed uterus were present. April 5th went to hospital; temp. ranged from 99° to 100°; pulse 80 to 100; still a discharge of blood and mucus; leucocytes 14,000; hemoglobin 70 per cent. Operation to-day: Uterus curetted; soft tissue scraped out seemed to be decidua. Specimen lost. While most authorities claim that there is no decidua in extra-uterine pregnancy, Dr. Benjamin said he thought this could have been nothing else. A post-vaginal section found a cavity filled with dark blood and blood-clots, degenerated tissue, some organized and some degenerated blood-clots. An abdominal opening was made to control arterial bleeding. Left tube and ovary were removed.

The specimen consisted of part of the tube and ovary in the posterior wall of the cavity. Dr. Benjamin thinks this must have been a tubal pregnancy, that the fetus escaped early, perhaps when she had her first severe pain, and the tube ruptured into the broad ligament. No fetus was found, but the specimen showed some organized blood and perhaps some placental tissue, the doctor thought, though no microscopic examination had yet been made.

Dr. Abbott remarked that the uterine scrapings could not have been decidua, for none is formed so far as known in cases of extra-uterine pregnancy. He said it must have been endometrium.

Dr. Benjamin also presented a submucous fibroid of the uterus, removed from a patient aged 39. The symptoms were pain in the pelvis, excessive flow, and dysmenorrhea for 18 months. Tubes, ovaries and uterus were removed. A coil of small intestine adherent to the uterus had been separated off together with a flap of serous membrane from the uterine surface. This flap covered the raw surface without narrowing the bowel. The fibroid is a hard fibroid and is globular, as nearly all submucous fibroids are. The tubes are much thickened, deformed and cystic; the ovaries are also cystic. These complications, he stated, are usually present in fibroids of the uterus.

Dr. Benjamin also showed a portion of the wall of a hydrocele. This showed bands of tissue, which partly divided the sac-cavity into nearly two compartments. It also showed a thickening of the tunica vaginalis at several points where a small trocar had been inserted at different times, four or five times a year for three years.

Dr. L. B. Wilson presented the specimen of a brain, and representative sections therefrom, of a case received a few days ago from Dr. J. B. Dunn, of St. Cloud, Minn. The man was taken suddenly with symptoms of intense meningitis and died four days after his first illness. Dr. Dunn removed the brain about sixteen hours after death, packed it at once in a jar surrounded by ice, and sent it to the laboratory. It was in good condition when received.

On removing the dura a perfectly typical meningitis with pus filling the sulci, especially over the vertex was found present. A very limited number of lanceolate, Gram-stained, encapsulated diplococci were found in the smears. Cultures gave an abundant growth of diplococcus pneumoniæ, unmixed with any other organisms.

The microscopic specimens, direct cover slip and Nissl-stained sections, show the character of the exudate, the few diplococci and those extracellular and the round-celled infiltration of the pericellular spaces about the larger cortical cells.

The case is of interest in contrast with one shown about a year ago, which was received from Dr. G. D. Head. This was of a child a few months old, dead on the eighth day after showing symptoms of meningitis. In this case enormous quantities of diplococcus pneumoniæ were present in the exudate, most of them being intracellular.

NEWS ITEMS

Dr. W. Van de Ever has located at Milton, N. D.

Dr. O. D. Pherrin, of Springville, Iowa, has located in Emery, S. D.

Dr. A. J. Button, of Hammond, Minn., has decided to locate elsewhere.

Drs. Shaneley and Shields, of Lidgerwood, N. D., expect to build a hospital.

Dr. H. McI. Morton will spend the summer in the hospitals of London and Berlin.

Dr. G. W. Balkcom, who has been practicing at Tower, Minn., has located in Minneapolis.

Dr. A. W. Giddings, of Anoka, Minn., has returned from Florida, much improved in health.

Dr. E. Haugseth, of Minneapolis, has taken the practice of the late Dr. Reinstad, of Madelia, Minn.

Dr. A. H. Christensen, of Mayo, has formed a partnership with Dr. H. F. Kilgore, of Luverne, Minn.

Dr. T. R. Watson, of Zumbro Falls, Minn., has begun practice in Zumbrota, as successor to Dr. Crews.

Dr. C. N. Burbon, of Elmore, Minn., has given up practice at that place and will practice in Minneapolis.

The Sisters of St. Benedict, of Duluth, will erect a hospital building in Crookston to cost about $30,000.

Dr. L. F. Schmauss, of Mankato, Minn., has returned from a trip to Europe, where he went for special work.

Dr. H. W. Hall, of Pullman, Washington, has gone to Philadelphia to spend three months in post-graduate work.

Wadena, Minn., is to have a hospital, the large boarding house of Thomas Miller being used for hospital purposes.

Dr. L. L. Mayland, of Kenyon, Minn., a graduate of the State University, class of '96, has located at Bagley, Minn.

Dr. F. M. Prettyman, of Bemidji, Minn., who retired from practice a number of years ago, has taken up his work again.

Dr. S. J. Froshaug, who has practiced in Twin Valley, Minn., for the past eight years, has located in Luverne, Minn.

Dr. E. C. Wheeler, who has been associated with Dr. Wear, of Fargo, for several years, has opened an office by himself.

Dr. Ella Powers-Herman, a graduate of the Woman's Medical College, of Philadelphia, has begun practice in Sioux Falls, S. D.

Dr. M. A. Trow, formerly of Chatfield, Minn., has located at Lamberton, and has formed a partnership with Dr. Crandall, of that place.

Clearwater, Minn., hopes to be selected as the location of a $50,000 sanitarium, which eastern capitalists will build somewhere in this state.

Dr. G. Ross Caley has located at Bethel, Minn. For some time Dr. Caley has been in charge of the practice of Dr. Hixson, of Cambridge.

Dr. W. H. Aborn, of Hawley, Minn., has gone to Chicago for special study. Dr. F. W. Simpson, of St. Paul, will have charge of Dr. Trow's practice in his absence.

Prof. George Gottstein, of the University of Germany, Breslau, and Dr. Von Ravensway, also a noted German surgeon, recently made a visit to Rochester, Minn., as guests of the Drs. Mayo.

Dr. E. A. Hensal, of Alexandria, Minn., has taken charge of the General Hospital of that city, and will make many improvements in building and equipment. The hospital will be open to patients of all physicians.

The cost of the new hospital to be erected at Grafton, N. D., by the Sisters of Mercy, of Devils Lake, will be about $30,000, the contract of the building being $22,000 and for the heating and plumbing $6,000.

The last meeting of the Minneapolis Pathological society to be held this university year will be one of special interest. Dr. Thos. G. Lee will read a paper, which will be illustrated by lantern and microscopic specimens. We understand that a general invitation is extended to physicians to be present. The meeting will be held May 19, at Minneapolis, in the Histological Laboratory of the State University.

FOR SALE.

A large and finely assorted medical library, containing the latest standard works in all departments. Also a large-sized, four-plate MacIntosh static battery, in perfect order. All at a bargain. Address, Room 220, Syndicate Arcade, Minneapolis.

NORTHWESTERN LANCET

A Semimonthly Medical Journal

VOL. XXII JUNE 1, 1902 NO. 11

ACUTE SUFFOCATIVE PULMONARY EDEMA

By Le Roy Crummer, M. D.

OMAHA, NEB.

The attention attracted by Steven's recent article, not only in England but also to a certain extent in this country, leads me to report the following case of acute suffocative pulmonary edema. A careful search of the American text-books on medicine shows that such cases cannot be identified under the description of pulmonary edema in any of them. Steven says the same is true of most of the English authors. Auld[1] claims that the condition was described by Lænnec, but a careful reading of his descriptions shows that it by no means fits the condition as I have seen it. Von Leube and Eichorst, of the Germans, are silent concerning it. Strümpel[4] refers to this condition by inference. The French have long noticed this condition. Dieulafoy[3] gives by far the best description. Girandeau, Renaud, Huchard and Bouveret have described cases.

The characteristics are a sudden attack developing without ascertainable causes during usual health, of an alarming dyspnea, accompanied by a profuse expectoration of white or pink frothy mucus of low specific gravity. The attack lasts one to six hours, and passes off with or without treatment, as suddenly as it came in most cases, though death may occur during the attack. Physical signs are all obscured by the diffuse generalized mucous râles of all sizes. The heart's action is usually labored, and the pulse strong and rapid. Steven[1] divides the cases into primary, i. e., without demonstrable disease in other organs, and secondary, where there is disease of the heart or kidneys, which may give occasion to the pulmonary complication. Dieulafoy considers it always an accident of nephritis.

Lissaman[2], in analyzing the condition, attributes it to vasomotor spasm of the pulmonary vein and consequent pulmonary stasis. It may also be due to the failure of the left ventricle, as seems to be the cause in the case I am about to describe. I have recently seen an analagous case of sudden dilatation of the right ventricle with consequent cyanosis, venous pulse, etc., which rapidly recovered.

On August 3, 1901, I was called to see an old gentleman of sixty-seven, who had been in his usual health up till eight o'clock that evening; but then he suddenly became dysneic, and began to expectorate large amounts of froth. I saw him at eleven. He was sitting up, and grasping the arms of the chair, the accessory muscles of respiration all being on tension. His extremities were cold, his skin damp, huge drops of perspiration on the forehead, expression anxious; breathing, despite the greatest effort, was shallow and very rapid; every fifth or sixth breath was a little deeper, and with a hack but no cough; and two to three drachms of pink froth were expectorated. On physical examination there was some relative dullness at the bases of both lungs. Auscultation revealed large, moist râles over the entire chest, obscuring both breathing and heart-sounds. The pulse was rapid (136-140), strong, regular. The condition was indeed serious, and a fatal termination was anticipated. Aromatic spirits of ammonia, every fifteen minutes, and strychnia hypodermically gradually caused an amelioration in the symptoms. The breathing became deeper, and the expectoration less. The anxiety and prostration passed away, and finally, under the influence of a small dose of morphine, the patient at 3 a. m. resumed the recumbent position, and fell into a calm sleep lasting until 8 a. m. On the following morning there was no evidence of the desperate condition, save a severe muscular fatigue.

A more careful physical examination was instituted. The lungs were found normal in every respect save that a few moist râles appeared occasionally. The area of heart dullness was increased to the left and downward. The apex beat in the mamillary line and sixth interspace was rather wide and heaving. Over the aortic interspace could be heard an onward systolic murmur and a long, low, high-pitched diastolic murmur. There was dullness under the manubrium sterni. The arteries of the neck and arms were visible, tortuous, and sclerosed. The pulse was about 100—typically Corrigan. The pulse tension was 140 m. m. Later the tension rose to 180 m. m. The diagnosis of aortic regurgitation was clear, though the patient had not previously suspected heart trouble.

The urine was cloudy, 1023, acid, with a trace of albumin. Casts were found, together with a few blood-cells.

In a very few days the patient was able to resume his work, and was in a fairly good condition under heart stimulation, etc.

On October 10th, just as suddenly, without over-exertion, error in diet, or other assignable cause, a second attack of suffocation came on, and with the same symptoms and fully as severe as at the first. The same treatment, with the addition of adrenalin chloride, was instituted, and recovery was much quicker, the attack lasting but three hours, instead of six, as in the former one.

Following this attack there were a persistent failure of cardiac compensation, swelling of feet, enlarged liver, and dilated heart, for which treatment did very little. On November 10th there was a similar attack of edema, but very transitory; and on November 12th a cerebral hemorrhage developed from which the patient died.

The question of interest in connection with these cases is, Have we a condition in this symptom group sufficiently characteristic to make it a nosological entity? If we can establish this, the differential diagnosis from similar pulmonary disturbances must be made clear.

We find characteristic of the recorded cases, the sudden onset without cause; the anxiety; the deep grade of depression; the peculiar expectoration without cough; the rapid recovery from the attack with no demonstrable physical signs remaining, and the tendency to recurrence. These constitute a picture which does not agree with any of the ordinary forms of pulmonary trouble, independent or secondary.

Somewhat similar conditions are found in asthma, pulmonary embolism, acute pulmonary edema following removal of pleural pressure, and uremic dyspnea.

In asthma the attack, anxiety, and recovery are similar, but the expectoration is entirely different.

In embolism we have the same suddenness in attack, the expectoration may be very similar, but we have persistence of the symptoms, and the infarct is usually demonstrable by percussion. We also have the etiological factor, thrombosis, or varicose veins with embolism.

We do see sudden dyspnea with râles and expectoration following the removal of large pleural effusions at times. In mechanism and symptoms these cases could be considered the same, but the pathogenesis is different, and serves to distinguish them.

In uremic dyspnea we have as distinguishing features the stertorous or Cheyne-Stokes breathing, and the accessory signs of uremia.

Not only the time of development, but also the characteristics I have described, serves to separate this condition from pulmonary stasis.

In prognosis we can say, that death may occur during any attack as it did in the second case of Steven in the third attack. Lissaman's case had seventy-two attacks, and was alive and well at the time of the report. The influence, however, in rendering the underlying condition worse must be considered, and death may occur, as in my case, from an aggravation of the primary condition. On the whole, I think we may say that the prognosis of the attack is good, but of the case itself bad.

In treatment we may use the ordinary heart and respiratory stimulants, and in addition antispasmodics. I cannot but attribute the favorable outcome in the second and third attacks in my case to adrenalin chloride, which is reported to act as an antispasmodic on the pulmonary veins. Lissaman used chloroform with continued success in his case. Dieulafoy bleeds, and uses caffeine and ether hypodermically. Steven uses strychnine, digitalis, and aromatic spirits of ammonia with brandy by rectum.

In summary: We must admit acute suffocative pulmonary edema as a definite condition.

The diagnosis is important that we may be correct in our prognosis, and active in our treatment.

REFERENCES:

1. Lancet (London), January 11, 1902.
2. Lissaman, Lancet (London), February 8, 1902.
3. Dieulafoy, Pathologic Interne 2, XIII Ed, Vol. 1, p. 282.
4. Stumpel's Text-book of Med., Ind. Am. Ed., p. 183.

REPORT OF A CASE OF PARTIAL TARSECTOMY FOR DIFFUSE TUBERCULAR INFLAMMATION OF THE ANTERIOR TARSUS*

By H. B. Sweetser, M. D.

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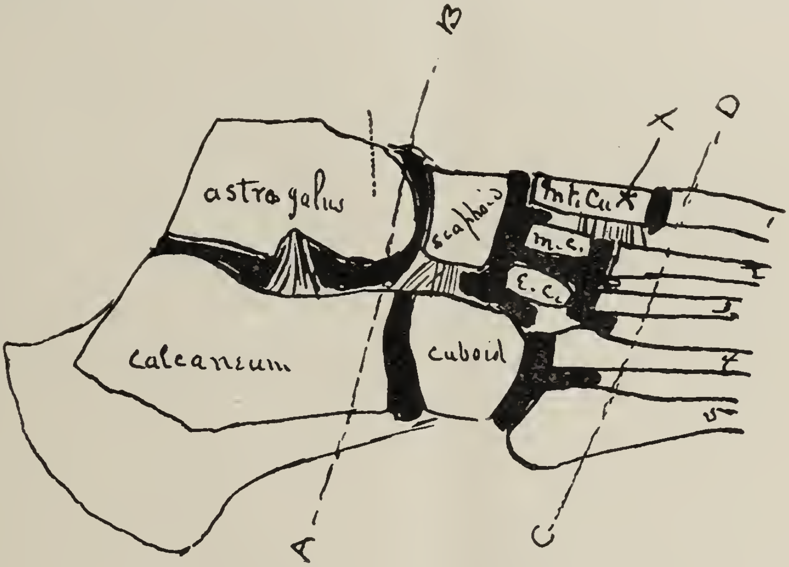
MINNEAPOLIS

This young woman, 19 years of age, was placed under my care in April of last year. She gave the following history:

About two years ago she began to have pain on the inner side of the right foot, followed by swelling, fever, and loss of weight. Eventually, walking became difficult, and she went on crutches. In August, 1900, an incision down to the bone was made over the point of most marked swelling, and caries of the internal cuneiform discovered. This was curetted thoroughly and packed. The cavity gradually filled and healed completely, the patient gaining much in weight and health. The tubercular process, however, was evidently not eradicated, for the pain and swelling very shortly returned, the skin broke down in the old scar, and a sinus formed, and



A B and C D are lines of incision through the bone.
X shows the primary focus of the disease.
Shaded parts indicate the different synovial joint sacs.

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*Read before the Hennepin County Medical Society, January 6, 1902.

did not heal. The use of crutches was resumed, the general health failed,—something further was evidently required to be done.

On April 12, 1901, I did a partial tarsectomy, removing the bony tissues to the extent indicated in the accompanying sketch of the bones of the tarsus. After thorough preparation of the foot, infection was still further guarded against by drawing tightly over the toes a sterilized soft rubber ice-bag. The sinus was then curetted, and plugged with a piece of gauze soaked in pure carbolic acid. Incisions, longitudinal and outside the extensor tendons, were made on the internal and external aspects of the foot nearer the dorsal than the plantar surface, extending below to a point beyond the bases of the metatarsal bones, and above to a point beyond the distal surfaces of the os calcis and astragalus, and deepened until they reached the bone. The periosteum was not lifted. With the raspatory the soft tissues of the dorsum were stripped from the bones the whole length of the incisions, and the fingers made to meet from side to side. The soft parts being retracted the bases of the metatarsal bones were cut through with a narrow saw. The astragalus and os calcis were also severed just proximal to the midtarsal joint. The detached bony mass was then carefully separated from the soft tissues of the sole of the foot and removed. The stumps of the metatarsal bones now dropped back and lay against the cut surfaces of the astragauls and os calcis, where they were held by gravity without the assistance of sutures.. [Note. —It would probably have been better to have fixed these cut bony surfaces by wire or chromicized catgut as there seems to be slight motion at this point, causing some pain and allowing of the sense of inversion or eversion unless the foot is supported by lateral braces in the shoe. This observation is made May 19, 1902.]. The cleansed fistula and the lateral incisions were entirely closed, a very small wick being left in the lower angle of the outer incision, which was removed after 48 hours. Copious dressings were applied to provide for the oozing, and in them was incorporated a posterior foot-splint to hold the parts immobilized and the foot at right angles to the leg. Healing was *per primam*.

At the end of two weeks a plaster cast extending to the knee was applied, and in it was incorporated a rectangular posterior splint of galvanized iron to hold the foot at right angles. The patient was then allowed on crutches, and after a time was sent into the country, being instructed to keep the foot off the ground. After a few months the cast was left off during the night, and was finally discarded about Nov. 1, 1901. She was then allowed to bear more and more weight on it, until, in December, she was allowed to walk about the house without crutches, a flat-footed splint being worn to take the place of the lost arch. You can see, as she walks across the room, that the disability is not marked, especially when it is considered that she has walked unaided only two or three weeks; and I feel certain that eventually there will be little disability. [Note, May 19, 1902.—She has discarded the flat-foot splint, and has had steel braces inserted in the sides of the shoes. This has overcome the slight tendency to rotation which caused pain, and her gait has been markedly improved. She walks very well without support, although she is still not able to walk long distances without discomfort, and therefore carries her crutches when going far from home. The accompanying photograph shows very well the appearance of the foot at the present time. Its length is 1½ inches shorter than the normal one, but there is practically no other deformity, and the arch is very well preserved.]

OBSERVATIONS

In commenting on this case I would like to make a few observations on tuberculosis of the tarsus.

1. In the first place the primary focus occurs much more frequently in the bone than in the synovial membrane, and it remains thus localized for a longer or shorter period. The bones thus most often affected are those which are most subjected to trauma; that is, those which enter into the formation of the arch of the foot, viz., the os calcis, astragalus, scaphoid, internal cuneiform and first metatarsal.

2. In the second place, this localization does not obtain long, and, when the tubercular tissue breaks through, the infection is likely to become widely spread, owing to the anatomical peculiarities of the synovical sacs between the tarsal bones.

3. There is a very grave danger of a metastatic development of internal tuberculosis, as in the lungs, meninges, etc.

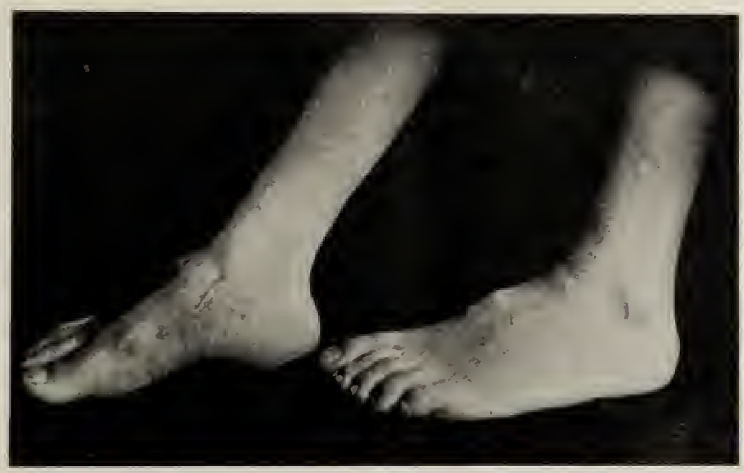
4. The tubercular process tends to progress

under so-called conservative methods, no matter how rigidly applied.

For these reasons the trend of modern practice is to deal radically with these cases after a fair but short trial of conservative methods. Indeed, where the tubercular process is clearly localized in a single bone it has been very strongly advised by many surgeons to excise such bone as soon as the diagnosis is made; and this advice I think to be sound. Such an operation is simple, and absolutely eradicates the tubercular focus. More than this, it may be urged as a non-mutilating procedure, for it produces practically no impairment of function whatever.

In diffuse disease of the tarsus the same advice holds good, and indeed more urgently so, for here the danger of internal metastasis is more marked, and the prospect of retrogression less so. With the disease confined, as it was in this case, anterior to the midtarsal joint a partial tarsectomy, such as was here done, entirely removes the tubercular tissue, and leaves a good and nearly perfect (functionally) foot. If the disease has already invaded the hind tarsal bones amputation then becomes necessary.

Concerning the technique of tarsectomy, the lateral horizontal incisions, as advised by Cheyne and Kocher, allow of perfect access to the parts, and it would seem scarcely ever necessary to make a transverse incision, which necessitates cutting the extensor tendons. These tendons, redundant at first, quickly shorten and regain their power to move the toes, as is seen in the case of this young woman.



Photograph showing the feet after operation.

In conclusion, I think there can be little doubt that such apparently radical operations are to be considered as conservative in fact, and much in advance of the commoner operative methods by curetting, gouging, injections of iodoform emulsion, etc.

PRIZE ESSAY ON THE DANGERS FROM SELF-DRUGGING WITH PROPRIETARY MEDICINES.

The Colorado State Medical Society offers a prize of twenty-five dollars for the best essay, for circulation among the laity, upon the dangers of self-drugging with proprietary medicines.

The competition is open to all. Essays must be typewritten in the English language, must contain not more than 3,000 words, and must be submitted before June 15, 1902. Each essay must be designated by a motto, and accompanied by a sealed envelope, bearing the same motto, and enclosing the name and address of the author.

The essay receiving the prize will become the property of the Society for publication. Others will be returned to their authors. Essays should be sent to the Literature Committee, Dr. C. A. Graham, Sec'y, Stedman Block, Denver, Colorado.

THE DIETETIC CAUSATION AND TREATMENT OF THE GASTRO-INTESTINAL DISEASES OF INFANCY*

By R. O. Beard, M. D.

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MINNEAPOLIS

The statistics of infant mortality are deplorably indefinite. Scientific medicine has not yet eliminated from American health-systems such indeterminate causes of death as infant debility, congenital debility, marasmus and inanition. When, however, the character of these uncertain causes of death is considered, it is fair to presume that, if they were properly classified, they would tend to swell, rather than to decrease, the number of deaths which are properly attributable to gastro-intestinal disease.

Mortuary statistics that the writer gathered twenty years ago, from American and European tables, showed that, at that time, forty per cent of all infants born died before they had reached the age of three years, and that of this large number of decedents twenty-four out of every forty succumbed to gastro-intestinal diseases or their complications. The statistics of to-day, which have been gathered from cities, towns, and villages of this country whose health reports are available, indicate that a marked progress has been made in the conservation of infant life. At the present time about thirty per cent of all children born die during infancy, and out of this thirty in every hundred who thus succumb, some sixteen die of diseases which are primary in the alimentary canal. The complications cited are simply those of cerebral congestion and convulsions, which in ninety-nine cases out of a hundred are attributable to gastro-intestinal disturbance. This death-rate remains vastly greater than that of any other period of life, and, if the medical profession may congratulate itself at all, in the face of these figures, it is upon the fact that their reduction has been attained by something of a recognition of the true causation and the essential treatment of these maladies, and upon the further fact that a better understanding and a more careful practice of the principles of infant hygiene have done more in the way of prevention than any therapeutic measures have done in the way of cure.

In again calling attention to the question of the causation and to the possibilities of the prevention or the cure of these death-dealing disorders of infant life, it may be well to recognize certain facts upon which these disorders are conditioned: (1) Gastro-intestinal diseases are essentially prevalent in infancy; they decrease with every year of life; they neither occur nor do they kill to any notable degree those whose years lie between infancy and old age. (2) They are largely of seasonal occurrence; their ravages are felt during the summer and autumn months. (3) They are of bacterial or parasitic origin. (4) The intestinal tract is usually the arena of their invasion.

The old arguments that account for these conditions upon the theory of a low degree of infantile resistance, which the heated term emphasizes, and upon the fact that bacterial activity is greatest during the period of greatest liability, are superficial. The inquiry into causation must go deeper than this.

A study of the personal element in the equation does not bear out this theory of infantile debility. The measure of resistance to disease-causes and their consequences is greater in infancy and early childhood than at any other periods of life. That resistance is frequently a matter of astonishment to the observer. It is to be noted, however, that infancy bears the heavy burden of rapid growth and of growth which is measured, not only by its rapidity, but by its specific character. The process of differentiation in the tissues is going on actively and especially in the nervous system at this period. This burden is met by the large development of the nutritive organs, which show a percentage of body weight quite disproportionate to that which they bear in later life. It is fair to presume that the greater activity of these nutritive functions and the comparative instability of the nervous mechanism which controls them, render them more easily liable to disturbance. It is, moreover, to be noted that in early infancy certain limitations are imposed upon the digestive powers. These limitations refer alike to the quality and the quantity of the food-stuffs with which the digestive organs are capable of dealing and to the speed with which the digestive acts are accomplished.

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*Read before the Minnesota Valley Medical Association, May 6, 1902.

Turning next to the pathologic element in the equation of gastro-intestinal disease, it is of importance to recognize not only the bacterial quality of these disorders, but the fact that these bacterial agents find their way into the gastro-intestinal tract usually through the medium of the food materials, which may be directly infected, or may be indirectly contaminated by infected utensils employed in their preparation, or in the feeding of the infant or through the agency of decaying animal or vegetable matter in their immediate vicinity.

Whatever may be the mode of this conveyance of pathogenic bacteria into the food passages, a prerequisite of their destructive activity there is a culture-field in which they may readily undergo development. The normal conditions of the gastro-intestinal tract, through the agency of the gastric juice in the stomach and through the influence of the bile in the bowel, are unfavorable to the development of bacteria. That the existence of such a suitable culture-field for the growth of bacteria is to be predicated, leads directly to the assertion of the dietetic causation of these disorders. That culture medium is afforded, and only afforded, by the presence in the bowel of a residue of undigested or indigestible food. It is a fact that the ordinary milk foods of infancy, ingested in excess, afford, by virtue of their simple chemical quality and the concentrated form of their constituents, a most ready subject of bacterial putrefaction. Whether by virtue of an unsuitable digestive quality or of the presence of food in excess of the possibilities of digestion or absorption, such a residue undoubtedly undergoes this ready decomposition in the intestinal tract. As the direct products of this putrefactive change appear, the intestinal toxines, which first provoke the inflammatory conditions of the mucosa and sub-mucosa, characteristic of the acute forms of these disorders, and which subsequently, if they persist, break down the lines of defence which the mucosa and submucosa afford, are absorbed into the blood and lymph channels, and then become the causes of the intestinal toxemia, which is the ultimate result of these disorders in their subacute or chronic types. It is a somewhat curious fact that this toxemic factor is not sufficiently recognized as in itself the ultimate cause of death. Gastro-enteritis, colitis, cholera infantum, and dysentery are frequently cited as death causes, but rarely is intestinal toxemia named.

Upon the seasonal element in this disease equation some emphasis should be put. It is a fact that at all ages the digestion is less robust during the heated term than it is at other times, and it is equally true that such bacterial development is more active during the warm and moist than it is during the cold and dry seasons.

If, then, the dietetic causation of the gastro-intestinal diseases of infancy is the primary one, it follows that their prevention and cure are only to be accomplished by dietetic means. There are but two principles which enter importantly into treatment. One of these is physiologic rest. The other is therapeutic cleansing.

The question of physiologic rest is a larger one than upon first thought may appear. It should be regarded as a means of prevention as well as a means of cure. It involves a study of the quality of the food-stuffs. Physiologic rest is to be attained in part by affording the digestive organs an easy task.

It still goes without saying that the human milk is the ideal food of infancy, but the American mother is a poor nurser, and the measures which tend to make her a better one are rarely considered or applied. It is perhaps not inconsequent at this point to urge the belief that the successful feeding of the infant by natural means depends upon a physiologic equation between the nursing mother and the individual nursing child, which begins, not at the moment of birth, but at the moment of conception. It is not the same equation with every nursing mother, nor is it the same equation with the individual mother in successive periods of pregnancy and lactation. Individual conditions, both in the mother and in the child, vary in different persons and at different times. The mother throughout her pregnancy should be the subject of study with reference, not only to the successful course of her gestation, but also to the successful establishment and maintenance for a sufficient period of the lactation which is to follow. Her diet, her exercise, her rest, her emotional conditions, should be carefully considered with reference, not only to her own nutrition and the nutrition of the fetus in utero, but with reference to the nutritive demands which will be made, and which must be met, in the future, and which will depend upon the proper development of the mammary gland during both events.

The fact of this physiologic equation affords the probable reason why wet-nursing is an habitual failure. It is harder to supply the missing factor of the individual mother by a foreign nurser than it is to supply it by an intelligent imitation of the human milk. When that imitation becomes necessary, there is no substitute which compares favorably with the intelligently modified milk of the cow. It is to be regretted that the Walker-Gordon method of modification has not received sufficient recognition to permit the support of laboratories even in our larger western cities. It is possible, however, to practice the method with tolerable accuracy and success in the private laboratory of the physician or even in the home. A carefully selected milk supply, a few sterilized glass vessels, in which to separate and contain the elements of the milk, and an intelligent understanding of the principles upon which those elements may be suitably combined in the imitation of the human milk and in answer to the needs of the individual case, are the prerequisites of the system.

Gelatine solutions and starchy gruels are sometimes of value as means of diluting the cow's milk. The idea that water will serve this purpose is a physiologic fallacy. It is not the sum total of the milk which requires dilution, but the caseinogen. It is the mechanical separation of the particles of the casein curd, which is to be attained by the dilution, in order that it may resemble the soft, flaky curd of the human milk.

Important as is the sterilization of the utensils to be employed in the milking, in food preparation and in feeding, and desirable as it is to secure a germ-free milk, it is nevertheless true that milk sterilization is under the shadow of a doubt as a probable cause of infantile scurvy. While the investigations of cases of scurvy which have been made do not indicate that a majority of the infants suffering from this disease had been fed upon sterilized milk, they do indicate that such a majority is more than attained by the addition to the number so fed of those who were consuming some form of evaporated, and therefore sterilized, milk-food. The writer has yet to see a case of infantile scurvy in a child fed upon fresh, unsterilized cow's milk, even when employed in combination with manufactured food-stuffs. Suitable care of the cow's udder, of the milker's hands, and of milk-containers, together with a rejection of the fore-milk, will secure a practically bacteria-free milk.

Of the manufactured infant foods, it is perhaps enough to say that, between those which contain objectionable ingredients and those to which milk must, of necessity, be added to secure the successful nutrition of the infant, they have proved far from satisfactory.

Physiologic rest for the digestive organs is further to be attained by a careful graduation of the quantity of food supplied to the infant. Common practice has been essentially unscientific in this regard. To fill up an ill-nourished and frequently-fed infant with as much food as it can carry, trusting to its readiness of overflow, is simply to invite indigestion and to add to the tendency to "starvation upon a full stomach." By careful study of the average capacity of the infant stomach, both by ante- and post-mortem measurements, and by a comparison of these with the average yield of the human breast at different periods of lactation, it has been possible to construct a table of gastric capacity at successive periods of infancy which has proved a useful guide to the required quantity of food. This table follows:

Age.	Quantity.	
	cc.	ozs.
One week	70	2¼
One month	95	3
Two months	120	3¾
Three months	150	4½
Four months	175	5½
Five months	225	7
Seven months	275	8½
Nine months	300	9½

While emphasizing the importance of securing a due degree of physiologic rest by a graduated quantity of food, exception is to be taken to the theory, which has been urged by certain clinicians, of the common occurrence in infancy of gastric distension. The atony of the infant stomach, which is frequently seen in cases of malnutrition, is a matter of persistent relaxation of the muscular fibres, which should be maintained in a state of tonic contraction during the period of digestive rest. It is not the result of distension by an oversupply of food. Common as is excess in infant-feeding, it is rarely so much a matter of excess in quantity as it is excess in frequency of feeding, and where oversupplies of food are ingested at any one time, relief is all too commonly had by the easy act of vomiting. The failure of the power of tonic contraction in the resting stomach is seldom accompanied by a failure of peristalsis. The loss of muscular tone which precludes rest is usually associated with peristaltic irritability. Both are the results, not of excessive quantity, but of persistently disordered chemical quality in the gastric contents. It is not the full stomach which shows relaxation; it is the empty one.

Perhaps the most important element in the attainment of physiologic rest is that of time. Digestion and absorption constitute a physiologic rhythm, in which the alternating intervals of activity and repose demand respect. The length of the period during which the food materials remain in the stomach is no guide to the duration of the whole digestive event. The stomach is simply a macerating reservoir, within which the preliminaries of digestion are accomplished. The long-continued presence of food in the stomach serves simply as a warning against the introduction of a fresh supply. Since the chemical changes in the food-contents which come with time are unfavorable to the reception of new food, a period of emptiness and rest is essential to every part of the digestive tract, in order to fit it for the reception and digestion of new material. The infant digestion is relatively slow. The residence of the human milk in the stomach usually extends over a period of two to two and a half hours, but the more important digestive changes occur in the duodenum. It has been the practice of the writer for the past eighteen years to feed infants at the breast, from birth on, not oftener than once in four hours, and to order an abstinence from food at night. In the supply of artificial foods or imitations of the human milk still longer intervals, involving from three to five meals in the twenty-four hours, are demanded. This practice, consistently and intelligently pursued, together with the observance of the other principles of physiologic rest, has secured to over eight hundred infants so fed, not only a practical immunity from gastro-intestinal disease, but a gain in weight, which is really the only true test of successful nutrition, above the average.

In the treatment of the acute forms of gastro-intestinal disease, the principle of physiologic rest has been successfully carried to the point of practical starvation for periods varying from one to seven days. In cholera infantum, complete abstinence from food during the acute onset of the disease, is invariably remedial.

A very material aid to physiologic rest is the therapeutic attainment of regular and thorough cleansing of the alimentary canal. By the use of large quantities of water, given to the always-thirsty infant, by the judicious employment of laxatives to clear away the debris of digestion in the small bowel, and by the systematic use of the colonic flush, a diminution of pain, of diarrhea and of toxemia is always to be secured.

By the study and practice of these principles of the dietetic causation and of the dietetic prevention and treatment of gastro-intestinal diseases in infancy, the writer has practically reduced his infant mortality to *nil.*

MEDICAL EXAMINATION OF CRIMINALS

The following is a part of a resolution which was adopted at the last meeting of the Congress of Criminal Anthropology, recently held in the city of Amsterdam, Holland; it should be followed in the rules of procedure in all of our criminal courts:

"1. Every child who has committed a crime should be examined by a competent physician, before being summoned into court, and those discovered to be actual degenerates should be placed in pedagogic establishments organized for the purpose of training and improving them intellectually and morally. 2. The biologic record of the criminal should be appended to the court record in every criminal case. 3. Government should take effective steps to arrest the progress of alcoholism."

THE OCULAR EXPRESSIONS OF RENAL DISEASE*

By Howard McI. Morton, M. S., M. D.

MINNEAPOLIS

Since the year 1812, when Wells wrote concerning the occurrence of visual disturbance in patients suffering from dropsy,—especially in pregnant and puerperal women and in scarlatina,—until the present day, when the significance of these related phenomena is recognized, though not completely understood, a number of distinguished clinicians and pathologists have studied with diligence this interesting subject.

About the year 1830 Bright published reports of cases in whom he demonstrated that in general dropsy the urine contained albumin and the kidneys, post-mortem, showed pathological changes. Soon after this he observed that in certain cases of albuminuria visual symptoms occurred. These observations were confirmed by Osborn, Addison, Christian, and others, although not until the year 1850 did Turk first demonstrate actual changes in the retina, post-mortem. Later studies—by Heyman, Zenker, and Virchow—threw much light on the subject. To Liebricht, in 1859, was due the honor of the first description of the ophthalmoscopic appearances of albuminuric retinitis. Without entering further into the history of these numerous workers and their results, we will proceed to consider the status that certain diseased processes within the eye hold to the various forms of renal disease, especially their value in diagnosis and prognosis.

While it is true that certain characteristic organic changes within the eye—for example diabetic cataract and albuminuric retinitis—afford extreme interest, and invaluable aid in the study of renal disease, my personal experience leads me to believe that functional diseases of the eye, arising from organic changes or, on the other hand, from mere inactivity of the secretory organs, are of more frequent occurrence and that, therefore, their recognition is a feature of assured importance. Thus I propose, in the first place, to deal with the related organic changes of the eye and kidney, and to follow with a consideration of certain functional diseases of the eyes, due to the non-elimination of certain irritating or toxic bodies in the system, following insufficient renal activity. Among the functional changes spoken of I desire to note that class of cases with ill-defined symptoms, such as soreness upon ocular excursion, irritability upon the least use, a tendency to conjunctival, especially palpebral, hyperemia, and, in the absence of abnormalities of the refractive media, muscular imbalance or ciliary insufficiency ; and, in this connection, to consider the significance of those interesting, though fortunately not common, cases, which, like the last group spoken of, are due to a toxemia, though of a more profound and very destructive type, designated as uremic amaurosis, especially the cases occurring in the pregnant or parturient woman.

That group of symptoms in which both the retina and optic nerve may participate, and which we designate by the somewhat generic term albuminuric retinitis, may occur in any of the various forms of kidney disease, even in acute nephritis and lardaceous kidney, but is not specifically distinctive, in the absence of confirmatory signs, of any one of them. In fact it is well to bear in mind that the typical picture as described, is not absolutely confirmatory of renal disease at all. I hasten to add, however, that its presence is not alone conducive to this belief, but, in the largest possible measure, it sustains the correctness of such belief. It is true that we may have retinal changes resembling those of albuminuric retinitis, not alone in diabetes, but in cases in which the kidneys are normal, and in which endarterial or other cerebral causes are at fault. I may add that ophthalmoscopic changes, which are similar to renal retinitis, may also occur in leukemia, severe anemia, malaria, and septicemia, as well as after profuse hemorrhage. These causes are rare, however; and in view of the fact that albumin may be temporarily absent from the urine in renal disease, we are justified in assigning another cause for the retinal changes only after great painstaking. So that renal changes, however theoretically distinctive, are not of themselves conclusive evidence of Bright's disease. I repeat, however, that their value, while not absolute, is great and, in the presence of urinary symptoms of a confirmatory nature, is absolute, and their prognostic importance is then both great and grave.

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*Read before the Hennepin County Medical Society, Minneapolis, May 5, 1902.

It becomes evident at once, having knowledge of the gravity of the symptoms, that the discovery of slighter and earlier changes in the fundus is of the greatest importance as indicating the possible onset of grave changes in the kidneys. It is well established that in the early stages of Bright's disease visible changes take place in the retinal vessels, and are of value in indicating changes in the kidneys. Brailey and Edmunds go so far as to maintain that the walls of the retinal arteries are constantly altered in Bright's disease, even when there is an entire absence of ophthalmoscopic changes.

These arterial and venous changes are those of fibrosis, being simply a local and visible manifestation of an early process invading the arterial system generally. They consist of marked thickening of the vessel-walls, shown by the narrowing in the arteries and in their increased tortuosity. This thickening of the muscular coats occasionally occurs to such a degree in the artery that at the point of its crossing the vein the venous current becomes interrupted. The central light streak of the vessels is decidedly more distinct than in health, a condition designated by Gunn as the "silver-wire arteries." These changes occur with wide-spread sclerosis and in most cases in the subjects of granular kidney. It is well to remember that they exist in many cases and that the greater value is to be attached to their discovery than to the easily recognized picture of a typical albuminuric retinitis. These changes in the arteries are frequently attended with changes in the veins and with hypertrophy of the heart.

The typical picture of albuminuric retinitis is characterized clinically by hemorrhage into the retina, white spots of degeneration and neuritis, with schlerosis of the fibres of Müller, which give a characteristic stellate arrangement of white spots about the macula. Hemorrhage plays an important role in the symptomatology, and has been ascribed to the double effects of the degeneration of the minute vessels and the increased arterial pressure due to the cardiac hypertrophy. Some atypical cases present a greenish atrophy of the optic nerve as illustrated in a recent case of mine which died less than a month ago. In this woman albuminuria followed a diabetes. These retinal changes may also occur with lardaceous disease of the kidney, and Eales has reported a series of cases in young people in whom a form of retinal inflammation attended functional changes in the kidneys with cyclical albuminuria.

These changes are usually bilateral, and in many cases the retinitis develops, *pari passu*, with cardiac hypertrophy. The frequency of this association led Traube to consider the hypertrophy of the heart as the cause of the retinal changes. The heart changes are not constant, however, and the relation of the condition to the retinal changes is that of effects of a common cause, i. e.. the prolonged renal disease.

In my experience the retinal lesions are symmetrical and of about equal severity. Cheatham, Yvert, and Webster have each reported unilateral cases of albuminuric retinitis, and Bull reports one hundred and five cases in which ninety-three of the total number showed bilateral disease before they passed out of his hands. The classic case of Yvert occurred in a man forty-three years of age, who during life presented profound cachexia with general anemia. The urine contained albumin. The ophthalmoscopic examination showed the right eye to be perfect, but the left eye with well-marked nephritic alterations. At the autopsy the right kidney, the right renal vein, and the ureter were absent, while the left kidney was enlarged and presented the appearance of parenchymatous nephritis. Yvert suggests that any irritation proceeding from one kidney may be capable of acting through the sympathetic on the capillary system of the other side, and thus bring about circulatory disturbance in the retina, as well as elsewhere.

Renal retinitis may occur at any age. Bull reports one case at five years, another at nine, and others at eleven and twelve years. Of the total number of cases of renal disease the proportion in which retinal changes occur is difficult to determine. Eales and Galezowski state about 30 per cent.

The prognosis in kidney affections in which characteristic retinal changes occur, is at once grave. In looking over my records I find that no cases that I have been able to follow have lived over four and a half years, and more frequently death occurred from six months to one and a half years. Lawford states in dealing with this phase of the subject that the onset of retinitis in Bright's disease is a certain indication of a fatal termination of the malady, and that, taking all of the cases, exclusive of pregnancy cases, from 75 to 80 per cent die within twelve months from the date of onset of the retinal lesions, and that over 90 per cent die within two years.

Uremic amaurosis may occur in any of the various forms of renal disease in which insufficiency permits the accumulation of certain toxic material. Whether, according to Frerichs, this is due to a ferment in the blood combining with excessive carbonate of ammonia, or whether due to uric acid or not, is not the purpose of this paper to discuss. It is undoubtedly a cerebral, and not a retinal, symptom. Dobrowlsky and Litten have described an edema of the retina occurring in cases of uremia attended with blindness, and Crocq went so far as to ascribe this blindness to the edema; but I am convinced that retinal edema will not explain the oft-times complete loss of vision, since I have a number of times observed marked traumatic retinal edema and with little, and, in some cases no, disturbance of vision. As an almost invariable rule no ophthalmoscopic changes are visible in cases of uremic amaurosis, unless the attack occurs in an individual with pre-existing albuminuric retinitis, or changes of less degree indicating organic kidney disease. A further evidence that the cause of blindness is cerebral, and not intra-ocular, is the preservation of the pupillary reflex, thus showing the paths for afferent and efferent impulses to be unblocked between the retina and the lower brain centers. This is an exceedingly interesting and valuable point.

Uremic amaurosis may occur in both acute and chronic renal disease. Tirard thinks that the uremic blindness of acute nephritis is a transient symptom, and its short duration very marked in comparison to prolonged blindness of the uremia of chronic nephritis. Its occurrence is more frequent in the acute form of kidney disease, and it is rather uncommon in patients of advanced years. Its occurrence in pregnancy is a grave symptom and in most cases an indication that the folded-hand period has passed.

Amaurosis following eclamptic seizures, especially where there have been preceding attacks, may be permanent; in fact it is rather apt to be so. It may precede such attacks, and may be the first evidence of puerperal nephritis, in which case the attack is usually transitory. It should be remembered that a temporary blindness may occur in the puerperal state independent altogether of kidney disease. This usually appears shortly after delivery, and lasts for a few days. Königstein attributed this to a spasmodic contraction of the retinal vessels, due to a vasomotor disturbance, and he thinks there may be some relation existing between this and the contraction of the uterine vessels.

I desire to speak of a symptom in this connecttion that I fail to find spoken of in the literature of this subject, consisting of transitory attacks of visual disturbance occurring a long time after the termination of the pregnancy. These attacks are sometimes described as a slight dimness of vision, which lasts for a short time, a few minutes perhaps, or, as in a woman now under my care in whom the loss of vision is quite marked, for several hours.

As to the prognosis of retinitis occurring in the albuminuria of pregnancy it is far less unfavorable in regard to both vision and life, than in the other forms of renal retinitis. Culbertson states that recovery of full vision occurs in 16 per cent, partial vision in 58 per cent, and blindness in 25 per cent.

We may now consider the possibility of confusing symptoms arising from other than kidney changes with uremic amaurosis. While this symptom is unattended with ophthalmoscopic signs, and thus of itself would afford little of value in making a differential diagnosis, the fact that the uremic attack is not infrequently the first evidence of an existing kidney disease with attendant retinal changes will often give conclusive evidence of the nature of the trouble. The confusion of uremia with hemiplegia due to subdural hemorrhage, is not uncommon, and Osler thinks that in some cases it is quite impossible to distinguish between the two conditions. Meningitis with deep coma and slight fever simulates the picture of uremia. I have seen a case of chronic Bright's disease with marked uremic intoxication confused with cerebral syphilis, and the diagnosis corrected by the use of the ophthalmoscope, the characteristic findings being subsequently sustained by the course of the disease. I may add that it is well to remember that the intra-ocular appearances of cerebral disease may quite closely simulate the picture of renal retinitis, but the latter lacks the mushroom swelling so characteristic of "choked disk." The white plaques also play a more important role in albuminuric retinitis than in the retinitis due to cerebral disease.

Gowers speaks of the possibility of confusing a polyuria occurring in the late stages of contracted kidney—and with retinitis,—with diabetes insipidus. In such a case the ophthalmoscope might greatly assist in arriving at a correct diagnosis.

Finally, in considering the last of the three classes of cases spoken of, we observe a series of patients in whom exist various symptoms, commonly associated with eye-strain due to focal defects or muscular imbalance. By carefully examining these cases their immediate necessity is not found to be glasses, nor attention to muscular anomalies, but proper diet and treatment directed to a lithemic state. There are certain forms of palpebral conjunctivitis in which no granulation and little or no infiltration exist, but simply a hyperemia easily seen through the transparent conjunctiva, that I have ascribed to such cases, and in which proper general treatment has relieved a condition that local treatment alone failed to do. In such cases one finds little or no secretion. I am convinced that many superficial scleral inflammations of an intractable nature are due to these causes. Such conditions are analogous to like changes occurring in the larynx and nasopharynx.

The element of periodicity is well marked in these cases, relapses occurring without discernible cause. Often climatic conditions markedly influence these eyes. Again an indiscretion in diet may bring about soreness of the globe and accommodative asthenopia. The "gouty eye" was well recognized by Hutchinson years ago, and no careful observer can long practice ophthalmology without recognizing the part played by these factors in ocular disease, both functional and organic. The occurrence of rheumatic iritis is a familiar example.

The retinal changes of diabetes are rare, and, it is generally agreed, afford nothing absolutely distinctive of sugar in the urine. Cataract occurring in these cases is common. Optic atrophy occasionally occurs.

It is well known that edema of the integument of the lower lid takes place in the general edema of the terminal stages of chronic kidney disease. Edema of the conjunctiva occurs, but is rare. Brecht has reported a case of this nature associated with retinal detachment. Hemorrhage into the conjunctiva may occur as a result of a general arterial degeneration. Samelsohn observed hemorrhages into both lower lids previous to an attack of hemorrhagic retinitis albuminurica, and Wharton-Jones described a hemorrhage into Tenon's capsule with exophthalmos and blindness. Paralyses of the ocular muscles, although infrequent complications of Bright's disease, are but another of the many symptoms of a weakened arterial system, and result from hemorrhage in the region of the nerve-roots or nuclei. These paralyses usually recover rapidly, but have a tendency to undergo relapses to the same or to other muscles.

We have accumulated in this paper enough evidence to indicate that the eye is concerned in many of the morbid changes affecting the kidneys.

The value of the eye in the diagnosis of such diseases does not lie in the fact that it is especially their point of concentration, but rather because it is the only organ of the living organism in which we can trace the onset, progress, or retrogression of minute vascular and nerve changes going on in other parts of the vascular and nervous systems, and so early as to afford, in certain cases, a danger signal, and in others a suggestion of a plan of procedure.

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WANTED—A BILL OF PARTICULARS

The State Board of Medical Examiners have issued a circular giving their rules for conducting medical examinations. The nineteenth rule, not the least nor the last, reads as follows:

"Handwriting of candidates must be legible and orthography must not be such as will disgrace the medical profession."

This rule is admirable, and we are in hearty accord with its sentiments; it is not specific. It leaves both the candidate and the judge in doubt as to the degree of badness, especially of the orthography, that will deprive the application of a certificate, or that will leave a profession unsullied. Pray, give us specifications, and, for the sake of both the candidate and the profession, err on the side of mercy.

MEDICAL SOCIETY DISCUSSION

Special attention is called to the letter to the editor by the genial treasurer of the State Medical Society, Dr. R. J. Hill. The editor is particularly pleased with Dr. Hill's letter, as it shows conclusively that some one sometimes reads the editorials. It is a further pleasure to be able to state that this is the first time in 27 years that Dr. Hill has voluntarily honored a medical journal with a communication from his pen.

Undoubtedly Dr. Hill has just cause for criticism, at least from a few standpoints. A medical society is the place to discuss medical papers, and it is no discredit to a society for an entire evening to be given up to the discussion of one paper, particularly when that paper is as ably written and presented as was Dr. Nippert's. On the other hand, a medical society should not always confine its papers and discussions to a few subjects, if it is an advanced and representative organization. It is possible that some member of the society may occasionally enjoy a new and "obstruse" topic or an unusual or infrequent disease that may be instructive, even though typhoid fever, diphtheria, scarlet fever, smallpox and pneumonia are generally prevalent. It is a common occurrence for a man to prepare and read a paper on some subject that has cost him hours of investigation and years of experience and study, and yet when he has finished his paper, no one discusses it, or the few that do confess their ignorance or ask some trivial question. The difficulty is that the members fail to read up the subject before the meeting, and hesitate to participate in the discussion for fear they may expose themselves to ridicule.

Discussions are valuable when the subject matter is raised, and men are prepared to discuss different subjects, and not simply cling to a few strictly self-limitable diseases. Let us have vigorous discussions, on all sorts of topics, to broaden our medical horizon.

We have too much that is commonplace, and not enough that enables us to recognize a large variety of medical and surgical diseases, and to treat the unusual and the infrequent. Thus the society would know more and care more for those diseases which demand more than ordinary skill in diagnosis and more than the usual amount of cerebration in therapy.

THE FEDERATION OF MEDICAL SOCIETIES

The plans of those who framed the new constitution and by-laws of the American Medical Association adopted at the last meeting did not stop with the changes wrought in the Association itself. The whole body politic of medical societies is to be rearranged throughout the land, and the relations of one society with another are to be such that all may work together as part of a universal organization, of which the center, the Association, is to be in touch with the remotest county society in the country.

The essence of the arrangement is that when a man wishes to join a medical society he can do so only by joining his county society, and this is the only society where his name is voted upon. If his county society elects him, membership in the state or national society is merely a question of paying dues. The only place where the question of eligibility is put to vote is in the county society, where those who vote are neighbors and acquaintances of the candidate, and are in a position to judge of his fitness. In order to carry this out the county societies become an actual part of the state society, and the membership of the state society is made up of all the members of the county societies. In this state, where many parts have no county societies, it will be necessary for the present that members from these parts shall be chosen directly by the state society, but part of the plan is an organized scheme for starting medical societies in the counties that have none at present. The relation of the national association to the state society is much the same as that of state and county societies. The state societies make up the national association, and control that body by delegates who, alone of the members of the Association, have voting power. The old method of allowing county and district societies to send delegates to the meetings of the Association has been done away with, and except by uniting with the state society the county society can no longer have a voice in the councils of the national body.

These changes are already accomplished as far as the national association is concerned. There is confusion upon this point in the minds of some, but the new constitution and by-laws were adopted at the St. Paul meeting last year, and this year the state will have but one delegate at the meeting of the Association, the new rules providing that each state medical society shall send one delegate for every five hundred members or fraction thereof. Next year the state will certainly be entitled to two delegates, and it is to be hoped that a few years more will see Minnesota represented by the four or five delegates to which the state is entitled.

The state society at its coming meeting will be called upon to act upon the proposed changes in the constitution and by-laws, which will bring this state into line with the scheme of federation. Medical societies all over the country are acting upon the matter this year. For the purpose of finding out the sentiments of the profession upon the subject before the state society takes action, the county societies have been asked to vote upon a resolution endorsing the proposed changes in the constitution and by-laws of the state society. So far as heard from the county societies have all expressed approval of the change. Action has been taken by the societies in the counties of Hennepin, Ramsey, St. Louis, Steele, Blue Earth, and Olmsted.

The new arrangement provides admirable machinery by which any reform or change of medical policy originating in a county society can be brought before tse national association through the system of representation by delegates. It strengthens the state society by increasing its membership through the addition of those members of county societies who had not joined the state organization. It strengthens the county society by compelling those who wish to join state or national body to join first the county society. When the Minnesota State Medical Society goes before the state legislature backed by the two thousand members to which it is entitled instead of the four hundred and fifty which it has, it may expect a more respectfull hearing that has been accorded to it in the past.

Below is appended an outline of the proposed changes in the constitution and by-laws of the State Medical Society to be voted upon at the coming meeting of the Society at Minneapolis, June 18-20:

1. Membership in the state society in counties where there is a county society in affiliation is to be had only by joining the county society. In counties where there is no affiliated county society, membership may be had by application, as at present, the names of applicants to be laid over for one year before election.

2. All present and future members of the affiliated county societies become members of the state society.

3. County societies already in affiliation with the state society may, upon request, continue in affiliation under the revised constitution and by-laws. The state society may take in new county societies by a two-thirds vote, the constitution and by-laws of the new society having first been approved by a committee, consisting of the president and secretary and treasurer of the state society.

4. The treasurers of the county societies to collect the dues of both societies and to report their roll of paid membership annually to the treasurer of the state

society. The treasurer of the state society to collect the dues directly from those members whose names are not on the rolls of the affiliated county societies.

5. The dues for the state society to be two dollars per annum, and to be decreased to one dollar when the membership of the state society reaches one thousand.

In addition to these changes in the constitution and by-laws, the following resolution is to be offered:

Resolved: That the next president of this society appoint a committee of one whose duty it shall be to look after the organization of county or district societies in those counties where there are at least ten regular physicians and no county society at present.

And be it further resolved that this committee be authorized to draw upon the treasurer for necessary expenses to the amount of three hundred dollars during the coming year.

Wm. Davis.

PROGRAM OF THE ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

Wednesday, June 18, 1902.

10 a. m.—Businness Session.

Address of welcome.

President's address.

Report of Committee on Revision of the Constitution and By-laws.

Wednesday, June 18, 1902.

2 p. m.—Section on Medicine. L. A. Nippert, M. D., Chairman.

Wednesday, June 18, 1902.

8 p. m.—Section on Hygiene, Medical Education and Public Medicine. W. S. Fullerton, M. D., Chairman.

Thursday, June 19, 1902.

10 a. m.—Section of Medicine. (Continued.)

Thursday, June 19, 1902.

2 p. m.—Section on Surgery. J. W. Andrews, M. D., Chairman.

Thursday, June 19, 1902.

8 p. m.—Annual banquet of the Society at the West Hotel.

Friday, June 20, 1902.

10 a. m.—Business Session.

Friday, June 20, 1902.

2 p. m.—Section on Surgery.

CORRESPONDENCE

DISCUSSIONS IN MEDICAL SOCIETIES

Minneapolis, May 3, 1902.

Editor Northwestern Lancet:

I notice your editorial on Pneumonia in the Lancet of May 1st, and I can hardly see what you mean by the last paragraph: "The discussion and the paper took up an entire evening and demonstrated the necessity of expediting business, and restricting the time of discussion." In your opinion, what is a medical society for? To see how many papers can be read in one evening, and how little can be said on the subject of the papers by members? I had supposed that the interchange of opinion and discussion of a subject, brought before us in the shape of a paper, was one, if not the chief, benefit to be derived by attending medical societies; yet you say the paper and discussion took up an entire evening, as though this was a subject of regret.

In my opinion it is far more valuable to us to hear the individual experience and method of treatment thoroughly discussed than to hear a number of papers read and passed over in silence. This is just the criticism I would make on the average paper: Some rare or abstruse subject, about which the society knows little and cares less, is chosen, and the paper is of no value from a practical standpoint. To my mind there could be no higher testimonial given to a paper than to say it "took up an entire evening in the discussion." What is the object of expediting business? What business? What are we here for? Restricting the time of discussion? Indeed, it is usually too much restricted. Discussion is what we want. The paper merely serves as an introduction to discussion. I agree that we may have tiresome discussions, the same speaker insisting on speaking repeatedly after all are satisfied he has told all he knows; but we have a by-law covering such cases, and in the discussion at the last meeting no such condition prevailed.

Now, Mr. Editor, tell us the object of a medical society. I may have been wrong during these 27 years, but I have always felt that the meetings that took an entire evening in the discussion of a paper were just the ones from which I received the most benefit. I once heard my friend Dr. Dunn say all he had learned of a practical value had been learned in discussions at medical societies. Text-books give us far better treatises on all subjects than most of our papers can give. If there is no discussion, why go to a society to listen to what you can get much better in your own library and by your own fireside? No, doctor, let's have more discussion, and if it should take up two entire evenings, instead of one, I should consider the time well spent.

Respectfully yours,

R. J. Hill.

BOOK NOICES

Pathological Technique. A Practical Manual for Workers in Pathological Histology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank P. Mallory, A. M., M. D., Associate Professor of Pathology, Harvard University Medical School; and James H. Wright, A. M., M. D., Instructor in Pathology, Harvard University Medical School. Second edition, revised and enlarged. Octavo, 432 pages, with 137 illustrations. Cloth, $3.00 net. Philadelphia and London: W. B. Saunders.

The second edition of this work embraces all of the latest methods of pathological research, except urine analysis, which is omitted because it requires by itself a good-sized volume for its adequate presentation. The new methods described in this edition are those that have stood the test of practical experience.

Part I. devotes 69 pages to post-mortem examinations.

Part II. is entitled "Special Bacteriology," and is a combination of "Clinical Bacteriology" and "Bacteriological Diagnosis" of the first edition, for the purpose of convenience of reference, and the avoidance of repetition.

Among the many changes and additions may be mentioned the amplification of the description of the parasite of actinomycosis and the insertion of descriptions of the "Bacillus of Bubonic Plague," of the "Parasite of Mycetoma (Madura Foot)," and of "Wright's Methods for the Cultivation of Anaërobic Bacteria."

Part III. contains two hundred pages of histological methods, staining of elastic tissue by Weigert, of bone by Schmorl, and of connective tissue by Mallory; examination of the blood and clinical pathology.

The book is clearly and fully illustrated, and is indexed and printed with great care.

A Laboratory Hand-Book of Urine Analysis and Physiological Chemistry. By Charles G. L. Wolf, B. A., M. D., Instructor in Physiological Chemistry Cornell University Medical College, New York. Illustrated. Philadelphia and London: W. B. Saunders & Company.

Nearly ninety of the two hundred pages of this admirable work are devoted to the examination of food-stuffs, and the relation of these to nutrition and to the waste products formed in their use. Carbohydrates, fats, protein substances, blood, digestive fluids, and the products of digestion, the examination of the contents of the stomach, and milk are discussed in a concise manner. The section on urine is fully covered and illustrated in the usual form, and is condensed and tabulated in such a manner as to aid the practitioner and student in arriving at the diagnosis with the least loss of time.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine of Belgium, of the Medical Society of London; one time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Volume I, March, 1902. Lea Brothers & Co., Philadelphia and New York, 1902.

In this volume Frazier writes of the surgery of the head, neck and chest, discussing particularly the removal of the Gasserian ganglion and the division of the sensory root of the trigeminus for the relief of tic douloureux. Krause has become so expert in the intricate operation of removing the ganglion that he can complete it in twenty-five minutes. He has never seen recurrence of the tic after removal of the ganglion although five of his cases were operated upon from six to eight years ago. The indications for the management of a case of tic are discussed with the conclusion that medical treatment should be persisted in from six months to a year according to the severity of the attacks. Strychnine in progressively increasing doses from a thirtieth to a tenth of a grain, hypodermically, is recommended as giving the best results. After medicine has failed peripheral operation is recommended, and as a last resort the removal of the ganglion.

The section on general medicine, by Packard, deals largely with typhoid fever and rheumatism. A short chapter on disinfection describes experiments which go to show that while formaldehyde is the best gas to use for the destruction of micro-organisms, dioxide of sulphur is the better agent to use against mosquitoes, rats, mice and vermin. An apparatus has been devised for filling the hold of a ship with dry sulphur dioxide gas in twenty-four hours and experiments have shown that all animals and insects exposed to the vapor may thus be destroyed. This knowledge is important in its bearing upon the disinfection of ships coming from ports infected with yellow fever and the plague.

Of diseases of children, Dr. Floyd M. Crandall, the editor, writes well, particularly in discussing the vexed and vexatious question of infant feeding. Dr. Crandall agrees with Holt that the important thing is not so much the percentage of fat, proteids, etc., in a mixture but the comfort and nourishment of the child. The secret of finding the right food is "to begin with a weak mixture and work up to the point of tolerance."

The remaining sections of the volume treat of recent advances in pathology, laryngology and rhinology, and otology. WM. DAVIS.

ATLAS AND EPITOME OF OPERATIVE SURGERY. By Dr. Otto Zuckerkandl, Privatdocent in the University of Vienna. From the Second Revised and Enlarged German Edition. Edited, with additions, by J. Chalmers DaCosta, M. D., Professor of the Principals of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. With 40 colored plates, 278 text illustrations, and 410 pages of text. Cloth, $3.50 net. Philadelphia and London: W. B. Saunders & Co., 1902.

Zuckerkandl's Epitome of Operative Surgery is unexcelled as a vade mecum for the student and general practitioner. Naturally its methods are strongly German, which are perhaps less brilliant in some particulars than those of American and French operators. This is not altogether disadvantageous, since, to use the language of the cigar trade, it is all stock and no style. It is clear and concise. It covers wonderfully well the operations of modern general surgery. It is profusely and well illustrated with cuts and lithographic plates. It contains nothing merely curious, obsolete, or indifferent, yet omits little essentially important. This second revised and enlarged edition is thoroughly up to date, and in every way an unusually satisfactory book.

JAMES H. DUNN.

INTERNATIONAL CLINICS. Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M. D., of Chicago, Alexander D. Blackader, M. D., of Montreal, H. C. Ward, M. D., of Philadelphia, T. M. Rotch, M. D., of Boston, E. Landolt, M. D., of Paris, Thomas G. Morton, M. D., of Philadelphia, Charles H. Reed, M. D., J. W. Ballantyne, M. D., of Edinburgh, and John Harold, M. D., of London, with Regular Correspondents in Montreal, London, Paris, Leipsic, and Vienna. Volume IV, Eleventh Series, 1902. Philadelphia: J. B. Lippincott Company, 1902.

The first section of this volume, devoted to therapeutics contains among other notable articles a description of the giving of strychnine upon a scientific basis, by Dr. A. Jacobi, of New York. There is also an interesting account of a case of poisoning by adrenalin chloride used as a nasal spray, but in a strength ten times greater than that called for in the prescription. The result was a deafness that promised to be permanent when the writer, Dr. Charles H. Burnett of Philadelphia, saw the case last. A couple of papers in this part of the book set forth the advantages of the climates of Southern California and Augusta, Georgia, respectively.

In the department of medicine are interesting lectures by Sir Dyce Duckworth and Dr. J. Mitchell Bruce, the former upon certain diatetic conditions, the latter upon prognosis in chronic valvular disease of the heart. A unique article upon "Winged Insects and Their Larvæ as Parasites in Man," by Dr. J. J. Walsh, of Philadelphia, will surprise many who read of the mischief that is sometimes done by the larvæ of flies.

In neurology, Walton, of Boston, has an illustrated lecture showing types of hemiplegia with localization of the cerebral lesions. In surgery are clinics by Senn, of Chicago, and Deaver of Philadelphia, dealing with a variety of affections. An excellent account of the modern treatment of chronic aczema and of ringworm of the scalp, by W. S. Gottheil, of New York, closes the clinical part of the book, the volume ending with a special article on the best methods of keeping case records in private practice, taken from a discussion of the subject by a number of the leading physicians of the department of general medicine, College of Physicians, Philadelphia.

Anatomy, Descriptive and Surgical. By Henry Gray, F. R. S., Lecturer on Anatomy at St. George's Hospital, London. Thoroughly revised American from the 15th English edition. In one imperial octavo volume of 1,246 pages, with 780 illustrations. Price, witn illustrations in black, cloth, $5.50 net; leather, $6.50 net. Price, with illustrations in colors, cloth, $6.25 net; leather, $7.25 net. Philadelphia: Lea Bros. & Co.

Gray's Anatomy for the past forty-five years has held the front place among works on anatomy, and for a long time easily outranked all other text-books on the subject.

The teaching of anatomy has undergone a change during the last decade, and though many of the facts are old, because of the advances made along the lines of Comparative Anatomy and Embryology, many new facts have been added, and new methods of presentation of the old ones became necessary. The older editions of Gray's Anatomy were well adapted for the then existing courses of anatomy in medical schools, where the entire medical course extended over a period of two years of six months each. It was then necessary to present the subject of human anatomy, with its medical and surgical application, in the shortest time possible. With the lengthening of the medical courses to four years, where the two first and a portion of the third year are given to the study of anatomy, a broader and more scientific presentation of the subject became possible, and a text-book which did not keep up with this broader treatment of the subject was no longer desirable.

This the editors and publishers of Gray's Anatomy have well realized and in the new American edition, the volume is brought up to these requirements. The same general arrangement has been adhered to in the new edition, and in that alone it resembles the older editions, with one exception, the chapter on General Anatomy and Embryology has been placed at the end of the volume.

Many of the chapters have been entirely rewritten, others thoroughly revised and important additions made. Additional illustrations have been added to the chapter on Osteology, and many of the old illustrations are reproduced by a new process, greatly improving them. Nearly all the illustrations of the bones of the skull are new, and the text improved by additional notes and the adoption of the new nomenclature.

The chapter on Articulations has been revised and additions made on the movement of the temporo-mandibular joint and the ribs. Here new illustrations have also been added.

The chapter on Myology is greatly improved by a better arrangement of groups of muscles under new headings. Improved and new illustrations, with rewritten text on the action of muscles, are noticeable.

The blood-vascular system is introduced by a splendid descriptive text upon the heart. This is a marked change from previous editions, and is most commendable. The subject matter is here, too, rearranged under new title heads. The blood supply to the female organs of generation is well illustrated by a new cut, as are also the thigh and popliteal regions. The nervous system is treated in an up-to-date manner. The text on the membranes of the brain is rewritten, and the whole matter rearranged in a more scientific manner than ever before. To it has been added a new chapter on tracts of nerve fibres.

The chapters on the organs of special sense and the thoracic and abdominal viscera are in keeping with the other new features, though less of them is new.

The usual treatise on the surgical anatomy of hernia follows, which is much as in the previous editions.

The closing chapter is upon "General Anatomy and Embryology," and is one of the most admirable features of the volume. It is new, well illustrated and scientific.

The feature of adding, throughout the volume, the surgical anatamy of the part treated, is maintained in this edition, and while this is an undeniably desirable arrangement, when using the work for reference, it is to be remembered that the book is essentially designed as a text-book, and how the surgical anatomy of a part can interest the beginner, who is gaining his first knowledge of the text, is an open question.

The new edition is by far the best which the publishers have issued for years, and again puts Gray's Anatomy in the place it held for so long a time among college text-books, which position has been denied it by many teachers of the subject for the past years.

C. A. Erdmann.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. G. Ross Caley has located at Bethel, Minn.

Dr. C. R. Ward has given up practice at Evansville, Minn.

Dr. O. O. Benson, from Illinois, has located at Sandstone, Minn.

Dr. A. J. Button, of Hammond, Minn., has moved to Bowdle, N. D.

Dr. C. J. Beise, of Fergus Falls, Minn., has decided to move to Mankato.

Dr. Saxe J. Frashaug has moved from Twin Valley, Minn., to Hills, Minn.

Dr. C. W. Riches, of Willmar, Minn., will locate in Minneapolis this month.

Drs. V. T. Wilson and E. R. Buck of Hudson, S. D., have formed a partnership.

Dr. Henry Frudenfeld, a recent Chicago graduate, has located at Madison, S. D.

Dr. A. B. Newman, of Casselton, N. D., has located in Great Bend, the same state.

Dr. W. S. Royce, a well-known physician of Chicago, has located in Yankton, S. D.

Dr. F. H. Gambell, who has been practicing in Alaska, has located at Thief River Falls, Minn.

Dr. Ira L. Edmunds, of Clearwater, Minn., has resumed practice at Cloud, where he was formerly located.

Dr. P. L. Vistaunet has located in Thief River Falls, Minn., and formed a partnership with Dr. George Tupper.

Dr. S. C. Borone has located in Clinton, Minn., and will rebuild the Samaritan Hospital recently destroyed by fire.

Dr. Ralph Weible, a young physician of Grandon, N. D., has become a partner of Dr. E. M. Darrow, of Fargo.

Dr. J. F. Bomberger has located at Mapleton, Minn., taking the practice of Dr. Schefcik, who goes to Hutchinson.

Dr. N. J. Shields, who has been doing special work in surgery in Minneapolis, has returned to Lidgerwood, N. D.

Dr. George F. Brooks, of Hibbing, Minn., and Miss Mabel Doty, of Courtland, Minn., will be married on the 4th inst.

Dr. C. L. Sneider, of Milwaukee, Wis., has located in St. Peter, Minn. He is a specialist in eye, ear and throat work.

Dr. Christopher Adamson, of Bemidji, Minn., died last month from blood-poisoning, caused by an operation he had performed.

Dr. A. W. Daniels, of St. Peter, Minn., was the recipient of a handsome loving-cup from the citizens of that place last month.

Dr. A. A. Law, of Minneapolis, has returned from a trip through Japan, and gives in this issue of the Lancet a view of Japanese hospitals.

Dr. J. A. Cameron, of this year's class of the State University, has received an appointment as assistant physician in St. Luke s Hospital, of St. Paul.

Dr. Rudolph A. Beise and Miss Minnie Keller, daughter of ex-Senator Henry Keller, of Fergus Falls, Minn., were married last month. Dr. Beive is now located at Eagle Bend.

Dr. O. E. Krogstad, who has been practicing in Sacred Heart, Minn., is now located in Minneapolis, having offices with Dr. Tennyson, at Washington avenue north and Twentieth street.

The physicians of Fergus Falls, Minn., are determined to have a hospital. Mr. V. A. Wright, a philanthropic citizen, has offered to put up a building to cost $15,000 upon a guarantee that the hospital will be properly maintained.

Dr. A. D. Larson, of Hermann, Minn., was dangerously injured a few days ago by a fall, and fears were entertained that he would not recover. He was graduated from the State University in '93, and has enjoyed a large practice at Hermann.

At the annual meeting of the St. Louis County Medical Society, held last month at the Spalding House, Duluth, the following officers were elected for the current year: President, Dr. A. E. Walker; first vice-president, Dr. W. R. Bayley; second vice-president, Dr. J. W. Carson; secretary, Dr. F. J. Patton; treasurer, Dr. C. E. Lum; board of censors, Drs. A. C. Taylor, J. M. Robinson, and J. M. O. Tufty. Forty-two members were present, and the society was reported to be in a very flourishing condition.

At the annual meeting of the North Dakota State Medical Society, held in Grand Forks, May 21 and 22, the following officers were elected for the ensuing year: President, Dr. G. A. Carpenter, Fargo; first vice-president, Dr. V. H. Stickney, Dickenson; second vice-president, Dr. W. H. M. Philip, Hope; secretary, Dr. E. C. Branch, Fargo; treasurer, Dr. H. B. Rankin, Jamestown. Dr. Thams was unanimously elected president, but at once resigned as he is to be absent a year in Germany. Dr. I. N. Wear, of Fargo, was elected delegate to the American Medical Association meeting.

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NORTHWESTERN LANCET

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ACUTE RHEUMATISM*

By H. L. Staples, M. D.

Professor of Clinical Medicine, University of Minnesota.

MINNEAPOLIS

PRELIMINARY REMARKS

The old expression that medicine is an art and not a science still holds true. We have made marvelous advancement in our surgical technic and in our knowledge of bacteriology and microscopical pathology. Chemical diagnosis has rendered much assistance, and we are on the borderland of a much wider application of serum therapy. Yet careful statisticians agree that all our surgery has not added one year to the life of civilized humanity; in fact, it has comparatively little influence on the length of life of the whole community. That it has lengthened the span of some, and greatly added to the comfort of others, is admitted. It must also be allowed that many have been hurried into Charon's bark, and prematurely ferried over the Stygian waters. In plain English, they die earlier and with more suffering than if let alone.

Prophylactic medicine is the pre-eminently great department of our art.

Vaccination, antitoxin, quarantine and serum prophylaxis are powerful bulwarks against maladies which would sweep the earth as of old were they permitted to rage unchecked. Plague during the reign of Elizabeth destroyed 1,000 weekly in London for many months, and in the time of Charles II., 70,000, out of a population of 460,000, died during a single year. Moscow lost 200,000, about one-half of its inhabitants, in 1570. Smallpox in the century preceding vaccination caused the death of 50,000,000 people in Europe. The annual death-rate from this disease in Porto Rico prior to 1899 and universal vaccination, was 621 in a million inhabitants. It is now two per annum. In Messina in 1855 22 per cent, and in certain towns of Austria 43 per cent, of the population died from cholera.

In the light of such facts our straining and gasping at the effect of a stitch here and a dose there become well-nigh puerile.

We are too prone early in our professional career to align ourselves along some narrow pathway and, with the down and verdure of springtime still radiant upon our cheeks, assume to be the masters of certain segments of human pathologic anatomy. Often this is carried on with sounding brass and tinkling cymbals, forgetting that "in peace there's nothing so becomes a man as modest stillness and humility." There is a proneness for two working in divergent lines to form a mutual admiration society, and give rise to a situation akin to that aptly expressed by the English poet—

"Thus fed by mutual aid the friendly pair
Divide their gains and all their plunder share."

To acquire the respect of the profession and the confidence of the people it is not necessary to convert one's self into an automatic bagpipe.

In case of our own society we spend ten minutes in discussing the very important subject of throat membranes, and two hours on dog surgery; not but that it was highly interesting, and the executions were of assistance to the city government. The disparity in time was too great so far as practical utility was concerned.

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*President's Address, read before the Hennepin County Medical Society, June 2, 1902.

There is no organ without its distinct function, perhaps not yet known, and the time will come when as a rule no major operation on the large cavities will be permitted without the co-operation of the surgeon and the physician. The French are asking that castration of women be prohibited except under similar conditions. The uterus is often reefed as to its ligaments, or hung for alleged or hysterical offenses. Divine Providence has recently removed by fire a large institution where the first therapy instituted on neurotic women was an Alexander's operation.

Lacerated cervix reached the acme of its usefulness when it was recently performed on a nullipara. A recent address before a rhinological society commenced by stating that turbinectomy was the most overworked thing in surgery. Many others are a close second.

Appendicitis is a handy term for obscure belly pain. In New York in 3,000 coroners' necropsies there were ten cases of this disease. In 42 cases diagnosed as appendicitis no lesion of the organ, either gross or microscopical, could be discovered. The operation is not a specific for typhoïd fever though frequently instituted. Recently one of my patients had his appendix removed for membranous enteritis.

Most operators are lamentably ignorant of the fact that abdominal pain is a frequent accompaniment of pneumonia in children, and several appendix operations with nearly as many deaths are reported. The Lord alone knows how many have not been reported. There is sometimes a wild rush to get a child on the operating-table before the castor oil, wisely administered by the nurse, shall have removed the cause of the distress. Tearing off the kidney capsule never will get beyond the free clinic abattoir, and need not be feared. Stitching of the kidneys of neurasthenic women has gone into oblivion along with ablation of the ovaries for hysterical manifestations.

Israel of Berlin has totally condemned nephropexy, and says it is a short-lived fad performed for the benefit of the surgeon rather than the patient. Stitching of the kidney substance has in numerous instances produced nephritis, while suturing the capsule is useless. It is now openly acknowledged that the symptoms are frequently due to gall-stones.

The gall-bladder now occupies the center of the stage. Many cases need operation and are cured. Kerr states that hundreds of stones may lie in the gall-bladder without discomfort, and that only about 5 per cent of gall-stone subjects have any noticeable suffering. One adult body out of ten will show them on post mortem; therefore, given a fat woman about fifty with a previous typhoid, also some dyspepsia on account of laziness and over-eating, and it will be a pretty safe gamble that you will find gall-stones if she will allow you to cut her open. These can be exhibited during convalescence or after the funeral to the relatives to emphasize the propriety of the work. If recovery results she develops a new psychosis, has her uterus tinkered, or seeks the neurologist to have a little static electricity applied to her mental pain.

A patient of mine five or six years ago had two attacks of hepatic colic. She had a mitral insufficiency with a hypertrophied heart, and also at times albuminous urine. I advised against any operative procedure, for a fatal result would be almost positive. She consulted a prominent eastern surgeon and two gynecologists, and they advised immediate operation. Not one of them examined her heart, but they were filled with enthusiasm to open her gall-bladder and pocket-book. She has had but one mild attack since that time, although no operation was performed.

The gynecologists are now up against the dome of the diaphragm in both sexes, and will soon contest with the dentists over the surgery of the head.

Thompson of London claims that no case of ascites due to uncomplicated cirrhosis has been cured by operation, while Brewer reports six cases with five deaths. One lived long enough to be tapped twice, when he was quickly discharged that failures might not be tabulated in every case. Recently someone has advocated ovarian extirpation for incurable cancer of the breast. This is worse than emasculation for reducing the prostate,—an iridescent and transparent humbug. At the Massachusetts General Hospital, in 1899, 30 exploratory celiotomies were performed. Eleven died immediately, 13 were not relieved, and 1 was reported cured. Operations for malignant disease of the stomach and bowels are of no avail. The pathologists have taught us that the malady is so extensive that the entire infiltration cannot be eradicated by surgical measures. The successes reported raise a legitimate doubt that cancer existed in these instances, but other pathologic conditions were present.

Gastropexy relieves slightly, for one year at the most, those who withstand the shock of operation, and then the condition remains as before.

In the light of such results I shall still adhere to my stomach-tube and antiseptics.

I have never been able to justify operations on semicadavers. It is preferable to wait a few hours and make a more scientific examination, post mortem, even if a few dollars are lost by the delay. We must strive for greater accuracy in diagnoses and especially a better knowledge of pathological anatomy. We give too much attention to the commerce and trade of medicine, and are apt to forget the two cardinal points,—the relief of suffering and the prolongation of human life. Let us perform fewer doubtful and useless operations; let us give fewer useless doses; let us rely less on the psychic effect or a sort of Christian Science to bolster up our actions, and we shall become better advisers and in the end more enduring with our patrons. Christian Science, Osteopathy, etc., are vain, wild reachings-out of the people for less mutilation and nauseation—a protest against the assumptive imperialism of the surgeon and the unscientific empiricism of the physician. There is much truth in the remark that instruction in medicine, and a large share of the practice, is one huge, continuous vaudevine. The point seems to be entirely lost to sight that in the terrific scramble for business when patients escape from a hospital with their lives, it is not to be taken as *a priori* evidence that all their symptoms have passed away.

Let us not be like the Pharisee of old who thanked God that he was not like other men, but rather like the poor Publican, and ask God to be merciful to us for those whom we have unwittingly destroyed. It is with "malice toward none and charity toward all" that these preliminary remarks are made, with the object to promote a closer co-operation of our forces for rational conservative work, and a more careful study of the foundations of medicine.

TREATMENT OF ACUTE RHEUMATISM

I propose this evening to call your attention to a purely medical disease, and, referring in an incomplete manner to certain of its phases, to dwell more at length upon the treatment of acute rheumatism with special reference to its endocardial lesions. The subject is so important that it should attract the interest of us all.

Rheumatism was anciently confounded with gout, under the common designation of arthritis, and the term itself is said to occur first in Ballonius' treatise "De Rheumatismo," published in Paris in 1642. The word is derived from *rheuma,* signifying a flow or flux. In one-half the cases the first attack occurs between the ages of ten and twenty years. In childhood the disease is more frequent in girls, and according to Cheadle, in 70 per cent there is a definite family history of rheumatism. Acute rheumatism of childhood produces more serious effects on the endocardium than in adult life. The knee and ankle are affected twice as often as other joints.

It is now generally accepted that the malady should be classed among the acute infectious diseases. The picture is characteristic. The rapid onset, chill, high fever, coated tongue, sour sweating, sudamina, the successive involvement of different joints, and the inflammation of various internal structures, indicate a severe general illness. Watson, who employed the poetry of expression, said fifty years ago: "The circulating blood carries with it a poisonous material which, by virtue of some mutual or elective affinity, falls upon the fibrous tissues in particular, visiting and quitting them with a variableness that resembles caprice, but is ruled, no doubt, by definite laws to us as yet unknown."

Bouillaud was the first to prove the frequency of the affection, and its existence in many cases in which the ordinary symptoms would not have indicated it. Wood, in 1847, states, with interest, a case of a young woman in which the inflammation in one of the lower extremities was followed by disease of the heart, which proved fatal in a few days.

The avenues of infection are chiefly the tonsils, to a less degree the respiratory and digestive tracts. The infection may be carried in not only through the palate tonsils, but also through the lingual and pharyngeal tonsils including the whole of Waldeyer's ring. An interesting case is reported by Lawson: A boy developed tonsilitis followed by polyarthritis and endocarditis. Ten days later a man sleeping in an adjoining bed had tonsilitis and acute rheumatism followed by endocarditis.

The joints rarely become purulent, as according to Courmont the infection is probably somewhat attenuated. He claims that attenuated micro-organisms have a strong predilection for joints. The germs may remain in the joints or involve the endocardium, producing endocarditis or the cortex of the brain producing rheumatic chorea. There is a close relationship between rheumatism and chorea. McLagan states that rheumatism is a disease of the motor apparatus, and that chorea is a disease of the motor centres. Chorea affects those having a history of present or prior rheumatism, and there are instances where the disease has followed shock in patients with a family history of rheumatism. We must remember that the growing pains of childhood are almost invariably rheumatic, the tendency to joint involvement being slight but with varied complications.

Dr. Thompson claims that in 25 to 30 per cent of cases, tonsilitis precedes, and he emphasizes the importance of cleansing the tonsils, and disinfecting with oil of gaultheria or other antiseptics.

Barcus reports a case of rheumatism in an infant 27 days old with classical symptoms. The treatment consisted of one grain each of sodium salicylate and sodium bicarbonate, every three hours at first, then less frequently. One month later the right knee became again involved; the heart apex was displaced, but there was no murmur; the pulse rate was 125. The mother had rheumatism when five months pregnant. This supports the theory of the infectious origin.

Rheumatism is a definite disease with a definite course and definite lesions and symptoms, all pointing to a distinct organism as the cause of the malady. There is a diplococcus which has been obtained in the joints, throat, pericardium and cardiac valves, in rheumatic nodules, and in the urine. It is eliminated chiefly by the kidneys, and albumin may be present in large quantities, yet the kidneys usually recover without serious damage. Malignant endocarditis and extensive joint destruction may be caused by the diplococcus alone without the aid of a mixed infection. It depends upon the virulence and quantity of the infecting germs and the power of resistance of the patient.

Eichhorst found hemorrhages in the heart, liver and kidneys, and blood changes resembling those of infectious diseases.

Wassermann reported a case of a young girl who after an acute attack of rheumatism developed chorea and died. The bacteria found in the mitral valves injected into animals caused multiple joint swelling and heart lesions, and on culture diplococci were demonstrated.

Meyer obtained from the throats of acute rheumatics diplococci arranged in chains, which produced in animals a disease resembling human polyarthritis. The contributions of Poynton and Paine are the most interesting. They describe chain diplococci which they isolated from the pericardium, endocardium and throats of rheumatic patients. Pericardial fluid inoculated into a rabbit caused joint swelling and death. This articular fluid showed diplococci, and injected into a second rabbit produced the involvement of many joints and a systolic murmur. The same bacteria were found in the blood of a case of rheumatic pericarditis.

A culture from the throat of a patient with tonsilitis and mitral disease produced in a rabbit a loud mitral murmur and death. At the necropsy there were found vegitations on the mitral valve, and diplococci in the granulations on the leaflets and in the pericardial and pleural exudate. A third rabbit gave no results, but a fourth had articular swellings in four days and a mitral murmur in ten. At necropsy a rheumatic valvulitis and diplococci were found. Another animal was injected with the micro-organisms from the last, and developed polyarthritis, pericarditis, pleurisy, pneumonia, and valvulitis. The same organisms were found in the exudates.

As stated by Poynton, other factors besides bacterial infection must be considered,— such as season of the year, exposure to cold, and especially heredity. There must be some condition of the tissues which predisposes to the disease. Moist cold acting on the skin predisposes to rheumatism. The Arabs suffer severely, though the desert is dry and hot. At night there is a copious deposit of moisture. They sleep on the ground, and their clothing becomes saturated with the heavy dew.

Rheumatism often involves the articulations of the cervical vertebræ, usually in the subacute form. This may be mistaken for torticollis or later infantile paralysis or Pott's disease..

Morbus coxæ may succeed rheumatism in other joints.

Rarely myocarditis may follow rheumatic valvular disease. A case is reported of a boy who had initial disease. The heart action became rapid, and there was cardiac pain. On autopsy the ventricles were studded with yellowish spots which showed in the cardiac muscle. A girl aged 20 had an attack of moderate severity coupled with slight endocarditis. On the seventeenth day she claimed to be free from pain and feeling well, and got up. Her feet had hardly touched the floor when she fell back dead. The post mortem showed the left ventricular wall dark in color, and so soft that on pressure it broke down under the finger. Microscopically the muscle fibres showed degeneration. The symptoms of weakness, cardiac pain, and pallor, also hysterical angina pectoris, may be due to this condition.

We must remember that dilation may give a mitral insufficiency not due to valve lesion.

The blood changes may be summed up as follows: There is a loss of hemoglobin which falls to 80 or 60 per cent. The red-cell count in prolonged cases may fall to 4,000,000. The leucocyte count in ordinary cases shows an increase to ten or fifteen thousand cells. Turk claims that a count of 20,000 or over indicates complications like pneumonia, pleurisy, or heart lesions.

In connection with the rheumatic endocarditis we sometimes find in children, rarely in adults, small sub-cutaneous fibrous tumors attached to the tendons and fasciæ of the muscles of the trunk or limb. In children the joints may present a stiffening with some tenderness, and little or no swelling be observed.

Rheumatism must be distinguished from rickets, syphilis, pyemia, and tubercular arthritis, and from the multiple arthritis of gonorrhea, scarlet fever, cerebrospinal fever and other infectious maladies. Osteomyelitis may occur in babies under three months. The femur, especially the upper end, is more frequently involved.

External treatment.—A light wool jacket and soft thin blankets are best for covering. The room should be dry, sunny, and not over-heated, but the temperature should be uniform during the 24 hours. Movement should be restricted as much as possible, and when feasible the warmed bed-pan should be employed. The limb may be fixed on a cardboard or bass-wood splint. Plaster of Paris should be avoided on account of the migratory nature of the disease, and the impossibility of inspection. As an external application I have discarded hot water, bicarbonate of soda, tincture of opium, poultices, and the much advertised muds. Methyl salicylate applied on cotton or flannel makes a clean, nice dressing, and is beneficial. Eichhorst recommends sodium salicylate, lanolene, and lard, in equal parts, applied three times a day. Oil of wintergreen is also efficient. A cradle is valuable where there is much pain.

The diet consists of milk, milk and Vichy water, and broths. A liquid diet should be enforced as far as possible. Ewart has laid stress upon 15 grains of salt with each pint of water, and I find that it aids. A drink of lemonade to which is added sodium bicarbonate or potassium citrate, 10 to 30 grains, according to age, is helpful, and gratefully taken.

Internal treatment.—As regards internal treatment we can say with confidence that this is an infectious disease where specific treatment is applicable, not that the salicylic compounds materially shorten the attack or prevent cardiac complication; but they do relieve pain, reduce temperature, and modify the intensity of bacterial activity. The best antirheumatic and antipyretic is salicylate of sodium made from genuine oil of wintergreen. There are two other kinds, the synthetic and that made from synthetic oil of wintergreen. These carbolic acid preparations have the same chemical formula, but the crystallization is different and the effect on the disease vastly inferior. They are more prone to cause nausea and delirium. Calomel may be given at first to assist in eliminating the poison. For an adult 15 to 20 grains of sodium salicylate with an equal part of sodium bicarbonate should be given every two hours for four to six doses, or until there is a marked reduction of temperature and relief of pain, and the patient is fully under the influence of the drug. Then the same quantity is given every four to six hours until the temperature is normal. It is an injustice to the drug and the patient to give five to ten grains every six hours at first. We must bear in mind that a varying temperature of 99° to 99½° is an indication that the infection is still active. Later three to five grains, four times a day, should be persisted in for from one to three months or even longer. The suggestion of its administration for one week in each month continuing one year is well worth considering. Salicin is a most valuable remedy, and I frequently resort to it, especially in children. It produces no cardiac depression or delirium, and it is a good tonic as well. Opium in the shape of morphine of Dover's powder is sometimes required for sleep. Frequently the salicylates are not well borne. Deafness, tinnitus aurium, delirium, dimness of vision, and cardiac depression are the most prominent manifestations. In such cases salicin should be substituted immediately.

HEART LESIONS.—We now come to the consideration of the heart lesions. It is highly probable that bacterial infection is present in every case of acute endocarditis. Sansom has suggested that the whole heart is swollen, its muscles enfeebled and infiltrated with exudates, and that there may be succeeding storms in the heart as in the joints in a cycle as short as 24 hours. The mitral valve is most frequently affected, and first of all the curved line on the auricular surface of each cusp, where they come in contact on closure. The pressure at this moment of closure equals a column of mercury 200 mm. in height. This forcible contact is made from 60 to 120 times per minute, so that micrococci are actually hammered into the spaces between the endothelial plates.

The endothelia become destroyed, and inflammatory products appear and project in bead-like masses or vegetations from the edge of the cusp. The whole valve surface later may be involved, extending to its attachment to the cardiac wall. The valves are softened and thickened by granulation-tissue and new fibrous formation. They readily yield, and are distorted under the blood-pressure until finally we have the hard, contractile, cicatrical tissue which fixes and distorts the valve. As the mitral valve, the one usually affected, becomes less pliable, the first sound becomes prolonged, and a faint whistling sound appears, which soon changes into a distinct bruit.

The cure of chronic valvular disease is one of the impossibilities of medicine. To my mind it causes as much suffering as any one malady that we have to contend with. Is not the detection and cure of acute valvulitis worthy of our most careful attention? The great object sought is the arrest of the disease before its ravages become irreparable. We constantly observe the crippling of a heart just at the advent of the time when the youth must assume the struggle for daily bread, and the maiden the cares of the household and maternity. We can hardly imagine a more pitiful condition than is often presented to us with an appeal for cure, which is impossible.

Von Jaksch of Prague was perhaps the first to demonstrate the natural tendency of diseased valves toward recovery in the early stages, if a sufficient amount of rest is enjoyed.

The late Dr. Sibson in his collected works showed that the difference between absolute and incomplete rest in the treatment of acute rheumatism was an exemption from heart complications of 70 per cent as contrasted with 40 per cent.

Salicylates readily subdue the pain and fever, and patients are almost invariably allowed to get up too soon. The relapses are correctly described by Dr. Howard as "recrudescences of a disease not yet terminated." The duration of the rheumatic infection is from 30 to 60 days, no matter what treatment is employed, and during the most of this time the patient should be in bed and under treatment. It must become patent to us all how faulty we are, nay, how almost criminally liable we are in allowing patients to be considered convalescent, and to go about just as soon as the pain is relieved and the temperature nearly normal. Frequently it may be normal for a few hours, and then an elevation be observed. A smoldering endocarditis may exist, and proceed to a condition beyond repair. The long-continued rest is often difficult to enforce. The lesion is not demonstrable, and the physician is possibly suspected of mercenary motives. In fact, to remove absolutely this suspicion, I have usually attended such patients gratuitously after the first two or three weeks. By a process of education we can in time eliminate this, and the true value of such treatment will be realized. A club-foot allows amateur theatricals in the hospital amphitheatre before gaping and credulous students—a possible source of future revenue. Abundant time is readily allowed for full recovery.

Taking the matter to ourselves, at boyhood, would we prefer to go through the world with a twisted foot or a badly valve-twisted heart? Most assuredly, the former. We put an inflamed joint or an eye at rest, but in case of an inflamed heart this is unattainable. The valves of the heart come into firm and close contact, computing 70 pulsations per minute, 100,000 times each day. By allowing a person with an affected heart to sit up and exercise moderately we increase the action from 25,000 to 50,000 times per day. We cannot control the automatic mechanism, but we can materially lighten the labor of the heart and relieve the valve strain by maintaining the recumbent position.

Sir Richard Powell, and afterward Caton, advocated in the later stages of rheumatism the administration of the iodides as an advantage in absorbing inflammatory thickenings. Microscopic examination of an inflamed cardiac valve exhibits new and imperfectly organized material effused into the substance or on the surface of the cusp. If this remains it may form permanent tissue, causing shrinkage, contraction, or occasionally necrosis. It is believed that the iodides exert quite an influence in aiding the absorption of the effused material, and diminishing the thickening. Sodium iodide is most frequently given in doses of five grains, administered three or four times a day. In addition to its absorptive properties it has the quality of a gentle heart-tonic. A common mistake is to give iodides with food. The iodide of starch thus formed is partially inert.

Dr. Herbert Davis, in 1864, advocated the application of small blisters adjacent to a rheumatic joint where there was a tendency to chronicity, and the efficacy of this procedure has been attested by all subsequent writers. This led Caton of Liverpool to employ blisters about the size of a half dollar between the clavicle and nipple on the left and right sides. The cardiac nerves are closely associated with the cervical ganglia of the sympathetic, with the pneumogastric, and the first four dorsal intercostal nerves. The improved heart's action after the application of blisters in this manner is often very noticeable. I have no doubt that this procedure is a material assistance in promoting the absorption of the recently effused material.

In the very early stages of a severe endocarditis opium is a valuable remedy to cause organic rest so far as possible in a moving organ and to promote quiet and sleep. Digitalis is harmful. Ice is sometimes advisable. I occasionally apply it in an endocarditis or pericarditis, always intermittently.

Now, I regret to say that I have had but eleven cases of my own in which to apply these three methods—rest, blisters, and iodides—carefully and constantly.

It is somewhat difficult to obtain suitable test-cases where the treatment can be properly maintained. One must be positive that if a murmur is found on first examination it is recent and not a relic of a former attack. It is most interesting and gratifying to observe the gradual disappearance of the bruit and to discharge the patient with a sound heart.

In eight cases the murmur disappeared entirely and they fully recovered. Two cases would not remain in bed the desired time, and have a well-defined lesion. One had a murmur when I first saw him, but denied a prior attack; but I suspect one existed, at least I could make no improvement on the leakage. Often no change is demonstrable for two or three weeks; then the bruit grows fainter, and enables us to imbue the sufferer with the hope that in a short time he will possess a sound heart and be able to enjoy life as before his illness.

We must regard every case of rheumatism as a great menace to the heart, which may cripple the person for all his life. About 2,000 of every million die annually of diseases of the heart and large blood-vessels, so that we can form some conception of the long-extended suffering thus entailed.

The rich, by exercise of caution in regimen and diet, can reduce the strain to a minimum; but to the laborer dependent upon muscular exertion, or the poor widow surrounded by her little ones, the choice is offered of starvation or heart failure. In Westminster Abbey among the tombs of England's greatest men I observed the epitaph of a poet written by himself:

> "Life is a jest, and all things show it.
> I thought so once, but now I know it."

To these poor wind-broken sufferers the jest becomes a stern and bitter reality, and it is incumbent on us to do more than in the past towards obviating this cardiac disaster.

A REAL DRUG STORE

Springfield, Mass., has the distinction of having the only drug store in all America. It is a pharmacy in the true sense of the term. No soap is sold, no stationery, not even patent medicines, or paints and oils, nothing but drugs, yet five clerks are employed and no soda water is dispensed, nor is it possible to buy a cigar at this store. It is one of the oldest establishments in the city and has a national reputation for the careful filling of physicians' prescriptions.

JAPANESE HOSPITALS

By A. A. Law, M. D.

MINNEAPOLIS

There is much in Japan to interest and surprise the foreign physician or surgeon, when we stop to consider it was no earlier than 1853 that Commodore Perry forced a foot-hold in the shape of a foreign concession in Tokyo bay from the imperial government. This act, with the later shelling of the Shiminosoki forts, and the forcing of the straits and the opening of the inland sea by the allied fleets, practically released Japan from medievalism, and let the light of modern civilization, education, science, and culture into the islands.

Japan with her awakening made the most of her opportunities, and sent her sons to the countries of the world to be educated. To-day she is reaping her reward. Her medical men are, for the most part, thoroughly educated in colleges abroad before they approach their medical training. Their medical education, in the main, is acquired in Germany and England although a few students come to America, but these more particularly for dental training. They are generally cultivated gentlemen, speaking German, French and English, although German is the official language in her universities.

What the Japanese scientists have done is familar to most of us. Adrenalin and Taka-diastase were discovered by them, while Dr. Kitesato, when a student in Prof. Koch's laboratory, discovered the bacillus of tetanus, and later became celebrated by reason of his discovery of the plague bacillus in Hong Kong, where he was sent as a member of a Japanese government medical commission. His work on that disease attracted the attention of the medical world and he was substantially rewarded by his own government for it.

Japanese quarantine laws are rigid and rigidly enforced. Her isolated position is in a measure a protection, but the fact that her ports are open to the shipping of the Orient exposes her to diseases prevalent in those countries. At present the plague and Asiatic cholera are rife in China and the Philippines, and as a result every vessel entering a Japanese port is held up and rigidly inspected.

Municipal sanitation is excellent as a rule, save perhaps in some of the inland cities, where surface sewerage still obtains; nevertheless the water supply to most of them is good, and the government physicians keep a watchful eye upon the cattle, testing the herds with tuberculin, and sterilizing most of the milk sold. The theory of the non-infectiousness of animal tuberculosis to people is evidently not seriously considered here.

Japan is afflicted with the same diseases that the rest of the world is heir to. Her semi-oriental position, however, has exposed her at various times to the ravages of cholera, plague and variola. Against these diseases she has learned to take stringent measures. Vaccination is required, and for plague both the Haffkine prophylactic plague innoculation and the Yersin serum are used, while the people are repeatedly warned about the danger of cholera, and measures to prevent it are taken by them.

Beriberi is a more or less frequent disease, as it must of necessity be with a people whose diet consists so largely of rice. Typhoid fever is relatively rare, as are the contagious diseases. Dysentery is omnipresent, as it invariably is in all countries where paddie fields are stagnant much of the year.

Japan's greatest scourges, however, are pulmonary tuberculosis and other pulmonary troubles, due unquestionably to their mode of life, that is, living in houses with paper walls, with no mode of heating them, save small charcoal braziers, and no furniture and no beds, necessitating their sitting and sleeping on the floor. Sliding screens for partitions make cold, draughty houses. Their dress, as well, is illy adapted to the extreme cold, which exists in some parts of Japan during the winter months.

It is the hospitals of the empire, however, which appeal to us. Taking them in the order of their lesser importance, we find at Nagasaki, one of the most southern cities and an important seaport, practically no native hospitals, aside from small ones in private houses run by native physicians.

A foreign hospital under charge of the French nuns and with Dr. Bowie as chief here has sixty beds. This hospital is fairly modern, having foreign furniture and being located in a first rate building. No surgery is done here. The hospital is pleasantly placed in a garden upon a hillside overlooking the bay.

Kobe, as well as Nagasaki, is without a hospital, but the loss is amply made up by Kioto, two hours away, for here we find the Imperial Medical University of Kioto, and in connection with it the splendid Imperial University Hospital.

This is essentially modern, and is built on the pavilion or cottage plan with the wards radiating from a central or executive building. The buildings are of wood, and situated in the midst of a delightful garden. They are furnished with the most modern of appliances and furniture, as well as thoroughly supplied with drugs. The hospital at present has 300 beds, but additions are being built which will make its capacity five hundred. Here are two splendidly equipped operating-rooms, a thoroughly trained corps of nurses, and a staff of forty native physicians. We saw in one morning an ovariotomy, appendyectomy, dissection of the neck, amputation of leg, trephining, and attempted removal of casserian ganglion.

The Japanese surgeons are deft and facile operators with no mean degree of mechanical skill. Their aseptic technique is thorough, except that no gloves are worn. In this hospital were seen a deal of beriberi, and many other medical cases unusual in a more temperate zone.

The Imperial Medical University of Kioto is interesting in its completeness. Its libraries contain all our own well-known text-books and periodicals, as well as those of German, French, and English authors. Its instruments, however, are almost entirely German, and German is spoken in the lecture room.

The anatomical and pathological laboratories were splendidly equipped, the dissecting material being abundant and well prepared. Some of the dried dissections were especially fine.

Yokohama again, although an important seaport, has no native hospital. This loss is made up for by the fact that there are a number of excellent European hospitals here. England, Germany, and the United States have naval hospitals here, while there is a general hospital with a French chief surgeon and Danish assistant.

Our own naval hospital is well worth attention. Situated high on a bluff and overlooking the beautiful bay, it is under charge of Dr. Harmon of the navy, and has eighty beds, a fine well-equipped operating-room and splendidly arranged and ventilated wards, and is an altogether creditable establishment. Here are sent sailors, marines, and officers from our fleets on this station, or from the hospitals of Manila and Cavite whenever a change of climate is necessary to a speedy convalescence.

Tokyo, the capital of the Empire, is the mecca of the lame, the halt, and the blind of Japan, and is exceptionally well equipped with physicians, both foreign and Japanese, with specialists, hospitals, and laboratories.

Here Dr. Kitasato has one of the best bacteriological laboratories in the Orient. He supplies the government with plague serum and diphtheria antitoxine.

There is but one foreign hospital here, the so-called St. Luke's, run by the missionaries, but poorly equipped and managed, and it has but small patronage.

The Tokyo Hospital is a private institution, owned by Dr. Takagi, a very able man, who was educated in England, and is an F. R. C. S. E. This hospital, although of stone, is in the native style, that is, with sliding screens for walls, matted floors, and no beds. It accommodates seventy patients. The operating-room is a model, and the work done there by Prof. Takagi is second to none in the Empire. Indeed, this hospital and its able head have the patronage of the imperial family and royalty. There is a training-school for nurses in connection with it, and the empress attends the graduation exercises.

This hospital being in the Japanese style, it is the custom, as indeed it is with most of them, to remove your shoes and go about in stocking feet. The nurses, in their quaint foreign uniforms, paddle about with the peculiar gait which comes from the habit of wearing clogs, and simulates a waddle more nearly than anything else. All Japanese women have it.

There are two things which impress a foreigner in all Japanese hospitals: first, exquisite cleanliness, polished floors, etc.; and, second, the fact that they are very noisy. Notwithstanding the habit of discarding shoes, the nurses and attendants paddle about in sandals, laugh, and shriek until the corridors ring, and it would be irritating to worn nerves if the Japanese had any.

We saw Dr. Takagi do some most excellent surgery. Three cases were so unusual that they will be reported in international clinics—one case in particular, where he removed a ruptured tube and a four months fetus from the peritoneal cavity, six weeks after the primary repture of the pavilion extremity of the tube.

The Red Cross Hospital of Tokyo is the model hospital of Japan. It is on the cottage plan, and has 220 beds. It is supported by the emperor, who contributes ten thousand dollars yearly, and by the Red Cross society of Tokyo. In connection with it, is a training-school for 300 Japanese nurses. The hospital staff consists of 28 men, and the chief surgeon and medical director is Dr. Hashimoto. This hospital has splendid roomy wards and private rooms, both for charity and pay patients; and it enjoys an extensive dispensary practice. Like most of the Japanese hospitals it lies in the midst of a beautiful landscape garden.

The great hospital of the Imperial University at Tokyo having 500 beds lies in the extensive grounds of the university on the outskirts of the city, and it takes two hours by ginrickishaw to reach it. Inaccessible we would think, but time to a Japanese is of little moment.

The buildings, laboratories, and operating-rooms are not modern, being much run down, of wood and crowded with charity patients. New buildings of stone are under construction, and will be essentially modern, with a capacity of 900 beds. This hospital has large amphitheaters, and a great deal of excellent surgery is done here. Many students attend its clinics, but it does not impress a visitor with its cleanliness, sanitation, or efficiency, as do the Red Cross or Tokyo Hospitals, although it has a tremendous amount of clinical material available, and a staff of the most eminent teachers in Japan.

There is an army or "ag" hospital of 300 beds, in Tokyo besides a few smaller private institutions.

The general impression of a student of Japanese hospitals and medical men sifts down into the conviction that the land of the rising sun has no laurels to look to, no regrets to manifest, and nothing to be ashamed of in her medical men,—rather can she congratulate herself upon the fact that within a generation her sons have put themselves upon a plane as high as that of any of the older countries who boast a civilization of centuries.

TREATMENT OF PELVIC CELLULITIS

By J. H. Rishmiller, M. D.

MINNEAPOLIS

Since the publication of my article on "Inflammation of the Pelvic Connective Tissue," in the Lancet of May 15, it has become evident, through oral and written inquiries, that I omitted a very important matter, namely, the treatment of the disease.

Local therapeusis would naturally demand our first attention, but this I shall briefly describe, and present more at length the surgical details and technique. Patients with pelvic cellulitis, circumscribed and diffuse, present objective symptoms of such a varied character that it behooves the practitioner to make a thorough bimanual examination of all the pelvic organs, including the rectal, as well as a general physical examination, in order to map out a radical and practical plan of treatment. If the phlegmonous exudate in the connective tissue presents indications of suppuration, then, of course, the sooner an operation is undertaken for the evacuation of pus, the speedier will be the recovery, and the better for the welfare of the patient. Even in cases where no fluctuation can be elicited, I do not hesitate to open the posterior vaginal fornix, and establish thorough drainage of the indurated mass. My experience has taught me that I can get these patients with phlegmonous exudates without suppuration, on their feet sooner and have them comfortable by radically entering the inflammatory mass and establishing free gauze-drainage, than by an expectant local treatment and procrastination.

From these sweeping assertions I do not wish to be interpreted as decrying medical gynecology. When undecided as to the feasibility of operative interference, vaginal medicated tamponade, from a week to ten days, will usually disclose whether to continue local medication or to operate. Where there is an acrid leucorrheal discharge, excoriating the vaginal mucosa and external genitalia, it is my plan to treat the patient daily, otherwise every second day. The patient should not be treated one day before or two days after menstruation. I no longer paint the vaginal fornices with Churchill's tincture of iodine, but use a preparation of ichthyol, tincture of iodine, glycerite of hydrastis, and boroglycerid. With this I thoroughly saturate one or two tampons of absorbent cotton, and insert them directly over the inflammatory focus. Next I insert a flat tampon of non-absorbent cotton, mainly for keeping the former in close contact with the mucosa of the vaginal fornix. A profuse vaginal osmosis will ensue, and after four or five treatments it will be appreciably evident whether it is best to continue local treatment or not. Sometimes it happens that the ichthyol and tincture of iodine produce a too active counter-irritation. In such individuals I am in the habit of alternating the application with boroglycerid, and thereby prevent this excessive irritation.

As will be comprehended, any desired strength may be had from the above preparation by the simple addition of boroglycerid. This treatment is enhanced by rest in bed, thorough daily evacuation of the bowels, and hot douches (110° F.), with Davidson's syringe, after the removal of the tampons, and again just before the next treatment.

The surgical treatment is not in the least hazardous, and the average practitioner with a general knowledge of surgical technique and asepsis, and with a due comprehension of the anatomical relations, will be sufficiently equipped to cure his patients. The patient should be examined, both before and immediately after she is under the influence of the anesthetic, as it will the better disclose the real conditions present by these two comparison examinations. The external genitalia should be shaved, and the vagina antisepticised. The patient should be in the dorsal position, for it permits a better appreciation of the pelvic landmarks. Sims' broad speculum should be introduced to retract the posterior vaginal wall, and then the posterior cervix uteri should be grasped with a Volsella forceps.

Some surgeons have a predilection for making the incision directly over the point of the abscess. If the suppurative accumulation is located on either side or posterior to the uterus, I invariably make my incision directly behind the cervix, and from there on make my way either to the right or left, as conditions dictate. My experience has convinced me that I can get better pelvic drainage by making the incision in the median line, and that I can to a certainty avoid entering vital structures. After having reached the pus focus the incision may be safely enlarged by Goodell's uterine dilator. Then the index finger should be introduced to break up all honey-combed abscesses, and furthermore, to detect and break up any larger accumulation more remotely situated.

It must be borne in mind that it is very characteristic for multiple small abscesses to develop in pelvic cellulitis, and as it is often exceedingly difficult to detect fluctuation, nevertheless none should be overlooked in being evacuated. When in doubt in such cases whether suppuration has taken place or not, I always feel on the safe side in establishing thorough drainage. The abscess cavity should be irrigated first with bichloride of mercury, 1-2000, and then either with Tiersch's solution or with sterilized water. The cavity should be packed with plain sterilized gauze, or, better still, with bichloride of mercury gauze. The gauze should be removed on the second day, and the abscess cavity should then be irrigated with a mild antiseptic solution.

Drainage should be encouraged diligently, and as broad a strip of gauze as can conveniently be introduced should be inserted. This treatment should be repeated daily until all discharge has disappeared, and the fistulous tract has healed from the bottom.

In rare cases, where we have to deal with such large pelvic abscesses as to distinctly point above Poupart's ligament are situated mainly in the upper part of the pelvis, it is advisable to make the incision and establish the drainage from its most accessible situation. Entering the peritoneal cavity must be gingerly avoided.

The general health must not be overlooked, and a bracing constitutional treatment should be instituted. Albeit, the surgical procedure is only the first step in the cure. Invariably the patients are anemic, and the number of red-blood corpuscles is below normal. These cases I prefer to place on some organic iron, and I have not had anything better than the solution of peptonate of iron and manganese with arsenic. Sanguiform is another strong hematic remedy. Both these preparations I have tested clinically by red-blood count, and have found them satisfactory. Strychnine, in 1-50 gr. doses, t. i. d., should not be omitted.

In conclusion, I hope that these auxiliary remarks may be sufficiently practical to aid in the correct comprehension of the treatment of pelvic cellulitis, which was omitted from my previous article.

THE PIONEER DOCTORS OF THE MINNESOTA VALLEY*

By J. W. B. Wellcome, Sr., M. D.

SLEEPY EYE, MINN.

FIRST PAPER

It was with embarrassment that I accepted the invitation and request of your committee to write a short history of the "Pioneer Doctors of Minnesota Valley," knowing full well that I am nearing my eightieth year, and that I cannot do this work in the style and finish of a younger man in the profession.

Most of the men whose biographies I have written I have known personally, and was well acquainted with their practice, their ability and character, having myself lived in the Minnesota Valley forty-three years. No doubt I have made many mistakes in dates. I have not been able to give the birthplace of all the physicians, and the time of their graduation. I have written to all the old physicians now living in the Minnesota Valley, and received but few responses to my letters. But, in the main, I think the history is correct. I have not been inclined to show partiality or to let prejudice lead me to make any unkind remark. If I have erred, it is because I have been ignorant of the facts. Some no doubt have not had the full credit due them, and others perhaps have received more than they deserve. I have served this association to the best of my ability in writing up this paper, which I present to the Minnesota Valley Association as their property, hoping that they will appreciate the efforts of the Pioneer Physicians many of whom are in the cemetery, and those left are tottering with old age.

DR. SAMUEL P. STODARD

Dr. Stodard, formerly of Garden City and later of Lake Crystal, came to Garden City, Blue Earth County, in 1866, and became the partner of the writer in the practice of medicine. He came there from Farmington, Maine. He had received a classical education in Boston, and had graduated at Dartmouth Medical College. He knew nothing of the hardships of the West when he located here, for he had been brought up in luxury. His great ambition to succeed as a physician and surgeon overcame all obstacles which he met on the frontier, and he went to work, responding to all sick calls when possible. He soon built up a large and lucrative practice. He was a great bookworm, but very practical in his professional work; in other words he had good common sense. With all his classical and medical education he did not set himself up as an authority. His extensive reading and good judgment made him one of the most successful physicians in the Minnesota Valley, being very progressive in medicine and surgery, and always investigating every new thing that was advanced by the profession.

He died of consumption at Lake Crystal in 1876. Just before his death the notes which he held against some of his patrons of the poorer class, for services rendered, to the amount of over $2,000, and a large amount of accounts were ordered not to be collected by his administrators. His remains were taken back to his old home at Farmington, Maine, and rest beside those of his father and mother in the city cemetery. His untimely death was a calamity to the people of Minnesota.

He was a member of the State Medical Society.

DR. J. C. JONES, MANKATO

Doctor Jones came to Mankato in 1867. The writer of this paper knew him personally. He was a man of fine physique, of great culture, and well read in medicine. He impressed those with whom he came in touch with the fact that he was a man far above the average. It was but a short time after he opened his office that he had a large and lucrative practice. It was prophesied but a short time before his death that he would become one of the leading physicians of the Minnesota Valley; but he was cut down early in life, and left his practice to others. In a few days after he was taken ill he was dead as a result of an abscess on the brain. Thus ended the life of one who was loved and respected by all who knew him, and who was an ornament to the medical profession.

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*Read before the Minnesota Valley Medical Society, May 6, 1902.

He was a member of the Minnesota State Medical Society.

DR. DENNIS HITCHCOCK, REDWOOD FALLS

Dr. Hitchcock was born in Wyoming County, Pa., in 1827. He obtained his medical education at Ann Arbor, Mich. In 1856 he began the practice of medicine at Waterville, Minn., where he remained until 1855 when he located at Redwood Falls, where he entered into active practice. He was the first physician in Redwood County. At the time he settled in Redwood County there was not a physician in Renville, Lac Qui Parle, Yellow Medicine, or Lyon Counties; and some of these counties were not organized at the time. His practice extended to a few scattering families in this great territory, getting what little remuneration he could from the poor settlers for his services. It is said of him that his humanity was so great and his sympathies so strong for the afflicted that he never murmured at his hardships. He said to me in an early day, "No one can imagine my physical and mental sufferings at times." He was on the extreme frontier, where were few roads except those made by nature, and he was frequently obliged to be guided in his travels to and from his patients, by the stars of heaven. Far removed from other physicians and surgeons he was not enabled to call counsel in cases of great emergency, but with a few instruments and a pair of old fashioned saddle-bags filled with medicine, much of it he had to compound himself as there was no drug stores in the country, he went forth among his patients to do his best.

The doctor was a good man and an excellent citizen, and he had the respect of the people. He was once coroner of Redwood County. On the third day of December, 1884, Dr. Hitchcock lay down and gave up his spirit to the God who gave it, passing over to the beyond.

DR. E. J. DAVIS

Dr. Davis, formerly of Mankato, now of Idaho, came to Mankato in 1868. He was a graduate from Albany Medical College in 1867. He had a good practice which he well deserved, and was one of the most progressive physicians in the Minnesota Valley. For years he has been a member of the Minnesota State Medical Society. I think he attended all of their meetings till he left the state, and has written many papers for the society, entering into their discussion on medicine and surgery. Although progressive he was very modest in presenting his views to the Society. He has been a member of the Board of Health of the State of Minnesota, and was very thorough in his work. He took an interest that few men have taken in this position. At his home he was gentle, kind, and unassuming. But few men of the Valley knew Dr. Davis and appreciated his ability, except those who became intimately acquainted with him. He was not aggressive and would suffer wrong rather than do wrong. He was a born gentleman, and would not stoop to low and disreputable means to destroy the medical reputation of a competitor. I wish there were more like him in the profession. He was highly respected. The doctor served six years as a member of the U. S. Pension Board, at Mankato. He was a member of the Minnesota State Medical Society, of which he was once president, the Minnesota Valley Medical Association, of which he was one of the presidents, and of the American Medical Association.

I think, gentlemen, that you all wish Dr. E. J. Davis success in his new field of labor in Idaho.

DR. C. G. SLAGLE

Dr. Slagle, formerly of Winnebago, now of Minneapolis, came to Minnesota at an early period of its history as a state, and located at St. Charles, where he commenced the practice of medicine. After two years practice he removed to Winnebago City, and there practiced his profession for 13 years. He was a thoroughly educated physician and surgeon, having received a classical education previous to his studying medicine. He entered the medical department of the University of Louisville, Ky., from which he graduated in 1861. At the expiration of 13 years of practice at Winnebago City he removed to Minneapolis where he still continues his practice. During his practice at Winnebago he was the right man in the right place. He, like other physicians of that time, had come west to grow up with the country and was ready for work. His work was very arduous for diphtheria and typhoid fever were very prevalent in his own and adjoining counties for a number of years, and from the history I have of the man he had but little rest, day or night, and he became very popular with the people. He was very progressive and during his residence in Minnesota he has written more or less for the medical journals of the country, and has always taken an active part in the discussions on medicine and surgery in various societies.

He held the Chair of Pediatrics in the College of Physicians and Surgeons in Minneapolis from 1883 until 1900. He is a member of the Am. Medical Association, State Medical Society (since 1880), Hennepin County Medical Society (since 1883), and has contributed many papers on medical subjects to these societies, and various medical journals; besides several popular lectures on medical subjects. He is now on the Board of Censors of Hennepin County Medical Society, and professor emeritus in the Medical Department of Hamline University.

We understand the doctor has a large and lucrative practice to-day in Minneapolis, where he is highly respected both as a medical man and a citizen. He was a member of the Minnesota State Medical Society and of the American Medical Association.

DR. JOHN KAULA, NEW ULM

Dr. Kaula was born in 1812 in Hungaria, and graduated at the Medical Department at Buda Pesth, Hungaria, in 1840. He served three years in the Austrian army as a rebel surgeon. He came to Minnesota in 1861; and lived on a farm a short distance from New Ulm. He was a man who was hard to get acquainted with, and very slow to Americanize. He was not inclined to come in touch with physicians of the Valley, but the physicians who did get acquainted with him say he was a man of good ability, and thoroughly educated in his profession. He was at one time county physician of Brown County. He had no enemies and never made many friends. He was always considered a very honorable man in all his business transactions. He died in 1893.

DR. ALFRED MULLER, NEW ULM

In writing up the history of this celebrated physician and surgeon I am aware that I am not able to do him full justice. He was born in Switzerland, and received a classical education, previous to his entering the medical department of Berne University, from which he graduated in 1852. Having fully equipped himself for the practice of medicine and surgery he thought that the United States would be the best field for his professional work. In about 1865 he sailed to the United States and came to Stillwater, Minn. He hung out his shingle at once, and commenced the practice of medicine, and continued in that city till he was appointed assistant surgeon in the U. S. Army, and was stationed at Ft. Ridgley in 1861. He remained government surgeon at this post for six years. He was in that memorable battle with the Sioux Indians in August 1862. It was a battle that tried men's and women's souls, a battle whose record will always be kept. During the fight three hundred women and children lay flat on their faces in a little outbuilding for hours without food or water, during which time three children were born. Col. Sheehan, who commanded the fort, says that it was in this trying place that Dr. Muller showed his ability and skill as a surgeon. He continued his work through the din of battle, expecting every moment to lose his own scalp by the Sioux devils. It is said of him that he never faltered through the entire siege, being cheered and assisted by his noble wife. Dr. Muller will always live in American history for the part he took at Fort Ridgley. In 1867 he moved to New Ulm, Brown County, where he opened an office, and for years had a large practice. He was always considered one of the best surgeons in the upper Minnesota Valley, and a man of sound judgment in his profession. He treated with respect his brother physicians that he considered worthy. He loathed, with the greatest abhorrence, the quack, professionally or socially. For a few years before his departure to Switzerland he did but little professional practice. During his practice in the Minnesota Valley he performed many wonderful surgical operations with great success. One of these was the taking off of both arms and legs of one Franklin, who, in 1863, at Ft. Ridgley, had been frozen, and who now lives at Blue Earth City, the man making a complete recovery. The doctor died in Switzerland in 1899. Peace be to his ashes!

NORTHWESTERN LANCET

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THE AMERICAN MEDICAL ASSOCIATION

The Saratoga meeting of the American Medical Association was an unqualified success from every standpoint. The attendance was much larger than ever before for several reasons. During the year more than the usual number of new men have joined the association on account of the change in the business methods by the House of Delegates, the greater time devoted to the scientific work, the excellence of the program, and the place of meeting.

Dr. Frank Billings, of Chicago, was elected president. For the first time in years, the surgeons gracefully conceded the presidency to the man of internal medicine. With such a scientific and popular head the association will continue to advance in every department.

Minnesota and Minneapolis in particular were fortunate in the selection of Dr. J. H. Dunn as vice-president of the association, and Dr. F. C. Todd as secretary of the Section of Ophthalmology.

The social side was particularly pleasing. There was no strained effort to entertain, each man being given every opportunity to follow his own desires. The springs were nearly drained by those who drank for results and those who drank out of curiosity, and both were satisfied. The music was good, the crowd was in the best of temper, and the near-by excursions were delightful.

RELIEF WORK AT RAILWAY STATIONS

It is not generally known that various aid societies are interested in the people who come to the Twin Cities by train. At each of the large depots there is some one to look after the women, old and young, who are strangers or who come to drift aimlessly with the population, homeless and friendless. For such the Deaconess Aid Society maintain a deaconess at the M. & St. L. depot to assist the sick, direct strangers to various points about the city, give addresses of hospitals, homes, boarding houses, and physicians. The depot officials are in hearty sympathy with the work, and render assistance cheerfully.

It is surprising to consider the number of women who come to the cities with neither friends nor funds, and it is astonishing to know that a large number of women come deliberately to enter a life of prostitution, driven perhaps by poverty, disappointment or inclination. These persons are recognized at once, and often timely advice and aid are offered them, and very often are accepted.

A still larger class of women come for the purpose of securing abortion, and many are furnished with the names of prominent professional abortionists by the physicians in the country. These people do not escape the eye of the deaconess. They are approached in a kindly manner, and their stories obtained. They usually give the name of the physician who sends them, as well as the name of the abortionist to whom they are sent. In many instances they are dissuaded from their purpose, and directed to return to their families or are taken to one of the homes for such unfortunates.

Eleven such cases were reported from one depot last year; three appeared in one week, and three were traced to one physician. No record has been sent in from the remaining depots as the work at the M. & St. L. is the only one that systematically keeps in touch with all trains.

This is a deplorable state of affairs, for there are many similar arrivals at other stations that succeed in reaching the abortionist. If physicians from the country, particularly the Dakotas, persist in sending girls to the city, why not direct them to the Crittenden or the Bethany Home where they may remain and be cared for?

It is a comparatively easy matter for a physician to rid himself of a pregnant girl by referring her to a city celebrity who lives by performing such offices, but it is more to the point to refer her to some place where she can stay under the care of an institution that will look after the moral as well as the physical welfare of the girl. There is no question as to the number of abortionists in the Twin Cities. They form a colony by themselves, and all do a thriving business. Some of them openly admit their vocation, knowing that they are in no danger of conviction by law when they operate without witnesses, and hence the few attempts at conviction, and therefore the mushrooms thrive. If more physicians would discourage wholesale abortions and abortionists the evil would lessen, but, if troubles of this kind persist, send the girl to a home for protection, and not to the street for punishment.

THE NEUROLOGIST'S ART

Dr. Joseph Collins, of New York, in the Journal of the A. M. A. for May 10, 1902, writes a clear, entertaining, and interesting paper in support of the art of the neurologist. He contrasts nervous diseases with other diseases, their similarity in obscureness, and the inability of the physician to give a definite diagnosis or prognosis in many of the diseases which are referred to the surgeon or internalist. He inquires as to how much therapy avails in the curative treatment of such diseases as those in which degenerative changes are inevitable, in heart, liver, kidney, and other organs. Diseases of these organs, as well as many of the uncommon diseases of the nervous system, are recognized as incurable, yet the true physician attempts to combat or relieve the diseases by various devices. The average practitioner, either from lack of interest or lack of knowledge, is inclined to belittle or magnify the conditions, and the patient is dissatisfied. The case may be referred to the neurologist for further investigation and advice. In many instances the practitioner considers the case as belonging to general medicine, and treats it accordingly. Where interest is lacking, the patient is often flatly and frankly declared incurable, and dismissed with a few general directions. In many instances an irreparable blow has been delivered to the neurotic, who is extremely susceptible to adverse suggestion. He sought the advice of the physician, hoping that something might be done to quiet his suffering and fears, and he is crushed and disheartened, and often is months or years in recovering his former courage and self-confidence. A word lightly dropped by the unthinking or indifferent practitioner has done more to force a simple nervous disorder into a chronic, persistent derangement than the original cause itself. It is also responsible for the support of Christian Science, osteopathy and allied forms of treatment.

Many forms of nervous disease are curable, some are slow in recovering, a few are incurable, but all are more or less relieved by proper management.

Herein lies the art of the neurologist as summed up by Dr. Collins:

"1. In recognizing that the vast majority of diseases that he encounters can be influenced by treatment.

"2. In having in his mind, when face to face with disease whose course he desires to influence favorably, a clear picture of the pathological process constituting the basis of the disease.

"3. In appreciating that the successful treatment of nervous diseases requires the most scrupulous attention to detail in the application of measures that experience has shown to be of value.

"4. In utilizing judgment and skill in the selection and application of measures that have been found useful, empirically and experimentally.

"5. And, finally, in realizing from the onset that a disease or disturbance of function which is either the expression of a prenatal defect, or of many years duration, cannot be overcome in a few weeks, or even a few months, of treatment even though the hand that administers it be both masterful and magical.

"You will remark that nothing is said of a knowledge of human character, of the possession of tact and an unlimited fund of sympathy, of personal determination tempered with a full recognition of human limitation—these constitute the neurologist's endowment, not his art."

CORRESPONDENCE

ORTHOPEDICS IN NEW YORK AND BOSTON

Boston, May 26, 1901.

Editor Northwestern Lancet:

I am writing again to give you my impressions of the great dispensaries of New York and Boston where the orthopedic work is mainly done.

In New York my time was spent principally in the outdoor department of the hospital for the Ruptured and Crippled, where there are about one hundred orthopedic patients in attendance, the new cases often exceeding thirty per day. Nothing impresses the physician fresh from private practice more than the wealth of material in a service of this kind. One can study any of the ordinary deformities by the score and see applied different methods of treatment and compare their efficacy, and even such rareties as Sprengel's deformity could occasionally be seen.

There were numerous assistants working under the efficient direction of the two chiefs of clinic, Drs. Townsend and Whitman, and the work was rapidly but carefully disposed of, so that in two and one-half hours nearly all cases were cared for. All apparatus used is made in the workshop of the hospital, which is thoroughly equipped and turns out good work at nominal prices.

Aside from the general routine work I was especially interested in the methods for treating lateral curvature, which were very largely by gymnastic training.

Classes of about eight girls came by appointment to the well equipped gymnasium, and were put through a thorough thirty-minute drill three times a week by a lady directress. The exercises were both corrective and generally strengthening, certain positions being determined in each case which more or less completely corrected the lateral curve, and these positions were then made the foundation for gymnastic courses to build up the general muscular development. All forcible methods seem to have been abandoned in favor of properly planned gymnastics, aided by occasional use of supporting jackets at night, or, in some flabby cases, for short periods both day and night. The results of these methods of treatment were quite striking and the girls looked ruddy and healthy, and seemed to enjoy their exercises.

Another surprising and most encouraging series of cases were a number of children with congenital dislocation of the hip, treated by Dr. Whitman, mostly by the Lorenz bloodless method, but a few by open operation.

The doctor showed about ten cases at the orthopedic section of the New York Academy of Medicine, in which the results were astonishingly good. In most of these cases it was impossible to say by examination, or from the gait, that there had ever been any trouble with the hips of these children, and from the expression on the faces of some of the doctors present I concluded that my surprise was shared by them.

Another line of work new to me was the treatment of bad flat-foot, of which there was a great number of neglected cases constantly coming in.

In the worst cases with stiff feet the patient was anesthetized, the deformity forcibly corrected, and the foot put up in plaster in an over-corrected position. The casts were kept on some two to four weeks and then a Whitman plate was fitted, and worn inside of the shoe. The result seemed to be very good, although there seemed to be a great tendency to relapse.

The great trouble with all the dispensary work is the neglect of the parents to bring in the children, and keep them under observation. Children sent out from the hospital with apparently cured hip-disease would reappear in the outdoor service with new trouble and the limb in bad position owing to the negligence of the mother to carry out orders given.

About the only criticism that I would venture to make on the New York work is in regard to the apparently unnecessary weight and thickness of their plaster jackets and other dressings, but the plaster men claimed that nothing but unbreakable dressings come back to the clinic in good shape, so they are probably justified.

The indoor service of the Ruptured and Crippled was greatly embarrassed while I was there by scarlet fever persisting in occurring as an occasional case in the wards, thus preventing the admission of new patients.

Dr. Gibney here has a most interesting service of some one hundred and fifty children, and operates once a week in a beautiful operating-room in the new wing.

Aside from the ordinary osteotomies and resections, the operations which attracted the most attention from the visitors were those of tendon transplantation for the deformities of infantile paralysis. I saw several of these done, and the results in many more, and they are quite efficient in correcting deformity, but the children seemed to have very little control of the displaced tendons, and had difficulty in using muscles to perform work different from their proper function.

It seemed the general impression that it would take some time for a child to learn to use flexors to extend a limb, and vice-versa, but that they would do so finally.

I found Dr. Townsend's clinics at the Polyclinic very interesting and instructive, there being a wealth of material which was made the most of by this able teacher.

In Boston I found many things done quite differently, although the general routine work was much the same.

The Children's Hospital is smaller than the Ruptured and Crippled of New York, but has nearly as large an out-patient department, and furnishes a great amount of clinical material.

Three methods used here interested me. First, the use of frames on most of the children that were in bed or on reclining couches, whether the cases were knee, hip, or spine, they having found this a most convenient and efficient method to control the child's position and of simplifying its care. Second, the application of the plaster jacket in the dorsal position by means of the Goldthwaite frame, in contrast with the more common method of suspension. There are certainly arguments for this method in the correction of the deformity secured and, to a less degree, in the comfort of the little patient during the tedious application of the plaster. Third, the treatment of flat-foot. In New York all seemed to use and depend upon the Whitman foot-plate, but the Bostonese foot did not seem to rest comfortably in this appliance, and in its stead were used a varying sized and shaped lot of plates, each being designed for the particular case. I must confess that they looked as if they might be more comfortable to have inside of one's shoe, but lacked the scientific universality claimed for the Whitman plate, which seems to rest on a firm foundation, if one can judge by the testimony of some of the New York doctors who have worn these plates.

I received most courteous treatment from the orthopedists in both New York and Boston, these gentlemen in spite of their stress of business always having time to entertain and instruct the strangers.

Respectfully,
J. Clark Stewart, M. D.

BOOK NOTICES

Morphinism and Narcomanias From Other Drugs. Their Etiology, Treatment and Medicolegal Relations. By T. D. Crothers, M. D., Superintendent of Walnut Lodge Hospital, Hartford, Conn. Editor of The Journal of Inebriety. Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, Etc. Philadelphia and London: W. B. Saunders & Company, 1902.

This book, from the pen of such a well-known authority on drug habits, Dr. T. D. Crothers, is well worth reading, for it gives a general preliminary survey in a new field of psychopathy, and points out the possibilities from a larger and more accurate knowledge of the subject. It defines the causes and conditions which develop morphinism and lead to other narcomanias; how they can be recognized, averted and prevented. Among the drugs that lead to diseased mental states are morphin, cocain, chloroform, chloral, coffee, tea, tobacco, and ether.

The work is particularly valuable for its medicolegal chapters on the "Relations of Crime and Responsibility." The subjects are exhaustively treated in Dr. Crothers' most interesting manner.

Every practitioner of medicine and law who buys this book will add a valuable work to his library.

Treatment of Gastric Ulcer.—Pariser (Deutsche Med. Wochenschr.) insists on absolute rest in bed as most essential in the treatment of ulcus ventriculi. He also recommends very highly a mixture of chalk and talcum, with or without magnesia, in the place of bismuth. He finds this mixture fully as effective and also considerably cheaper than bismuth. It forms an aseptic crust over the ulcer. The patient drinks 60 cm. in a glass of water on an empty stomach and then lies quietly on his back for three-quarters of an hour.

MISCELLANY

STERILIZED MILK FOR INFANT FEEDING

A few years ago the journals were filled with the praises of sterilized milk as a diet for infants, and it seemed to be conclusively shown, on very reasonable and scientific grounds, that by sterilization alone the dangerous bacteria contained in milk could be destroyed and the food adapted to the infantile digestion. A few years, however, have made a vast difference, and at the present time one reads but little that is not condemnatory of the measure, it being commonly stated that the sterilization of the milk destroys its vitality, coagulates its proteids, lessens its nutrient value, and produces infantile scurvy; all of these objections being urged upon reasonable and statistical grounds. It has thus come about that the use of sterilized milk has been abandoned. There can be little doubt that the objections urged against sterilization and its general condemnation are undeserved, in that other conditions than the sterilization may have been responsible for the dangers for which it is blamed. It can scarcely be said that any of the "sterilized milk" prepared in the ordinary way was really sterile, the method adopted for its preparation being altogether inadequate and entirely different from that employed by the bacteriologist in the preparation of the really sterile milk to be used as culture media in his researches. The ordinary method of treatment was to place the milk, dispensed in bottles, in a steam apparatus, in which it was kept from fifteen to thirty minutes, at a temperature which gradually ascended to that of boiling water. By this means many of the bacteria contained in the milk were destroyed, and probably many of their products decomposed, and though after this treatment the milk was unquestionably better than before, many bacteria failed to meet destruction, so that no permanent improvement resulted, the remaining bacteria growing as soon as the milk again cooled. Such partially protected milk was not infrequently kept from a day to a week before it was employed—sometimes protected, sometimes not protected, from subsequent contamination—and the results following the subsequent growth of bacteria in the milk may have been confused with the loss of nutrient properties belonging to the milk. To render milk really sterile, it is necessary to heat it to the temperature of boiling water three times on three successive days, or to expose it to live steam under pressure. However that may have been, it remains a fact that at the present time sterilized milk is out of fashion, and little attempt has been made to differentiate troubles really caused by the milk from those that may depend upon other conditions.

One of the best discussions upon the subject that has recently appeared is the paper by W. B. Ransom, in the *British Medical Journal* of February 22, 1902. In this paper the source of contamination of milk and the pathogenic properties of milk are first discussed, this being followed by a critical discussion of scurvy from boiled milk and the alleged loss of its nutrient value. The conclusions which Ransom reaches are about the same as those that should be reached by any thoughtful person. He says: "There is no solid evidence to show that milk raised to its boiling point (110° C.=230° F.), or to the temperature of boiling water for ten minutes or a quarter of an hour, suffers any diminution of its nutrient qualities. Neither is it probable that, if consumed within twenty-four hours of the heating, it will cause infantile scurvy. The same is true of Pasteurized milk heated to 80° or 85° C. None of these methods render the milk absolutely sterile, but they do kill most pathogenic microbes (for example, those of tuberculosis, cholera, diphtheria, and typhoid), and if the milk be kept cool and drunk within twelve hours of the heating, few or no spores will have developed into bacilli. Pasteurization is probably less reliable than heating to 212° F. for ten minutes, and is also more difficult to carry out, as it is easy with simple domestic apparatus such as Aymard's or other double saucepan, or Soxhlet's or Hawksley's bottle-holding tins, to keep the milk in a bath of boiling water for ten minutes.

"In times of epidemic summer diarrhea the heating should be prolonged for at least half an hour, and the milk drunk within a few hours, or subjected again to the process, as the spores of the bacillus sporogenes enteritidis are very resistant. Under all circumstances milk, whether raw or 'sterilized,' should be drunk as fresh as possible, and then the liability to gastro-enteritis and nutritional diseases will be diminished; but it is my emphatic opinion that infants who live wholly or mainly on milk, as at present supplied to us, should never be exposed to the dangers lurking in the raw fluid. Nothing in this paper is intended to detract, first, from the paramount importance of children being suckled by their mothers for the first seven or eight months of their life; and secondly, from the equally vital matter of securing a pure milk supply from healthy cows, hygienic stables and dairies, and clean milk-cans. Educational and legislative measures to secure such a milk supply should have the earliest support of every medical man."—Editorial in Medicine.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. Lincoln, of Wabasha, Minn., is enlarging his hospital.

Dr. H. M. Marks, of Platte, S. D., is building a private hospital.

Dr. Paul H. Burton, of Minneapolis, has located at St. Hilaire, Minn.

Dr. F. L. Albritton, of Salt Lake City, has located at Kalispell, Mont.

Dr. N. O. Ramstad, of Bismarck, N. D., has gone to Europe for special study.

Dr. T. W. Hovorka, a graduate of Hamline, has located at Silver Lake, Minn.

Dr. F. G. Benn, a recent graduate of Hamline, has located at Shevelin, Minn.

Dr. D. N. Reber, of Hamilton, Mont., has moved to Forsyth, in the same state.

Dr. Isabella C. Herb, of Rochester, Minn., has been attending clinics in Chicago.

Dr. G. F. German, a pioneer physician of the West, died last month at Ellensburg, Wash.

Dr. J. J. Deertz, who has just graduated at Hamline, has located in Aberdeen, S. D.

A class of a dozen nurses graduated at the State Hospital at Rochester, Minn., last week.

Dr. E. S. Finley, a graduate of University of Pennsylvania, has located at Zumbro Falls, Minn.

Dr. T. N. McLean has returned to Fergus Falls, Minn., after an absence of several months in Canada.

Dr. D. C. Darrow, of Moorhead, Minn., is building an addition to his hospital, at a cost of $3,000.

Dr. J. F. Avery, of Aitken, Minn., was married to Miss Mary Esmond, of Minneapolis, on the 4th inst.

Dr. S. W. Duncan, of Chamberlain, S. D., has been appointed Superintendent of the County Board of Health.

Dr. J. F. Flynn has bought the practice of Dr. L. L. McCurdy, of Madelia, Minn. The latter has located on the Pacific coast.

Dr. F. D. Gray, of Vesta, Minn., formerly connected with St. Joseph's Hospital, of St. Paul, has established a hospital at Vesta.

Dr. W. Y. Corry, of Hannah, N. D., has taken into partnership Dr. Brooks, a graduate of College of Medicine of Detroit, Mich.

The cornerstone of the new St. Vincent Hospital, at Crookston, Minn., was laid the first of June with elaborate public ceremony.

Dr. Frederick Lee Beckley, of Merriam Park (St. Paul) was married last month to Miss Myrtle M. Dwelle, of Lake City, Minn.

Dr. L. H. Bussen, a graduate of the State University, with this year's class, will have charge of St. John's Hospital at Fargo, N. D.

Drs. Adsit, Van Beeck, Cappellen and Fitch, of Hastings, Minn., have established a hospital, temporarily using rooms in the Masonic block.

The new hospital, called the Ebenezer, at Madison, Minn., was dedicated on the 2nd inst. It was built by the Norwegian Lutheran churches of the county.

Drs. M. H. Cremer and L. E. Cradon, who have been partners for some years at Mazeppa, Minn., have moved to Red Wing, Minn., where they will continue to practice.

Dr. A. B. Hart, of Minneapolis, has located at Pine River, Minn. The opening for a physician at this point was made known through the Lancet, and several physicians looked the field over.

Dr. Joseph Millett, a State University graduate, has become resident physician at Minnesota State prison at Stillwater, succeeding Dr. H. L. Webber, who has gone to South Africa to do missionary work.

Dr. H. O. Wolner, who graduated this year at the State University, has been appointed physician and hospital steward at the State Reformatory at St. Cloud, Minn. He is the first physician to hold the place.

The Hennepin County Medical Society elected the following officers for the ensuing year: President, Dr. J. W. Bell; vice-president, Dr. A. E. Benjamin; secretary-treasurer, Dr. F. A. Knights; librarian, Dr. G. D. Head.

Dr. Russel D. Carman, of St. Paul, now at Johns Hopkins, has received the appointment of assistant to the chair of operative and clinical surgery of the Marion-Sims-Beaumont College of Medicine, St. Louis, Mo. Dr. Carman began the study of medicine at the State University in '97.

The Crow River Valley Medical Society will hold its next meeting at the Soldiers' Home in Minneapolis, June 17. Drs. Chapman, Robertson, and Morell, of Litchfield, and Dr. Pilon, of New Paynesville, will read papers. Dr. Bissell, of the Soldiers' Home, will deliver the president's address.

The South Dakota State Medical Society, held last week at Scotland, elected the following officers for the current year: President, J. O. Duguid, Springfield; first vice-president, B. B. Bobb, Mitchell; second vice-president, C. B. Mallory, Aberdeen; secretary-treasurer, J. L. Stewart, Irene; assistant, R. C. Werne, Mitchell. The next meeting will be held at Mitchell the last week in May, 1903.

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SOME OPERATIONS FOR MALIGNANT DISEASE OF THE MOUTH AND NECK*

George Crile, M. D.

CLEVELAND, OHIO

The operations for malignant disease of the neck and mouth are based upon certain fundamental principles—the dangers may be classed as immediate, consecutive, and remote. The immediate, or operative, dangers are shock and collapse; the consecutive danger is infective inflammation, especially pneumonia; and the remote danger is recurrence of the disease. Among the causes of shock and collapse, hemorrhage is prominent, not so much the hemorrhage from the larger vessels, but the ever-present oozing from the smaller ones. The complete control of this form can be definitely obtained only by definitely controlling the arterial supply.

Temporary closure of the internal carotid, or temporary or permanent closure of the external carotid, minimizes the loss of blood.

Permanent ligature of the internal carotid as a routine measure to prevent hemorrhage during operations, is not available, because it carries with it a mortality rate of about 11 per cent on account of cerebral complications. This method would cost more lives than it would save. Permanent ligature of the external carotid is available in the cases in which that artery may be reached without partially doing a tumor dissection in advance. In these cases two principles are violated:

First—The tissue of malignant tumors should not be subjected to greater manipulation nor closer dissection than is absolutely necessary for their removal on account of dissemination.

Second—There will be preventible loss of blood in reaching the artery. It follows that in cases in which ligature of the external carotid on account of the position of either the primary or the metastic growth, involves more than the minimum loss of blood or more than the minimum manipulation of the tumor, temporary closure of the common carotid should be done. The unilateral anemia of the neck, face and head thus produced gives other advantages quite as important as preventing the loss of blood. The field of operation is kept clear, dissection may be made correspondingly more precisely and more quickly, and the entrance of blood into the respiratory tract obviated. Certain operations that are most difficult are converted into cadaver dissections.

The writer has closed the carotid arteries 32 times since 1897, and has observed no unfavorable side effects. As a means af controlling arterial hemorrhage it is absolute. The artery should be subjected to only sufficient pressure to approximate its walls. More than this is alike unsafe and unnecessary. Closure of the lumen requires but little pressure. Caution against a greater pressure must be emphasized.

The facility and accuracy of dissection in the bloodless field, especially in the region of the important vessels and nerves and more particularly in the dissection within the mouth, is so much facilitated that not only may more extensive operations be done, but they may be done more safely.

Next in frequency to hemorrhage, in causing shock and collapse, in this group of operations, is direct or reflex inhibition of the heart or of the respiration. This is due to injury of the vagus or its branches,—notably the superior laryngeal,—while the trunk of the vagus may be considerably manipulated without producing changes in the heart or the respiration. The superior laryngeal, either in its terminus in the larynx or its trunk, causes reflex inhibition on even slight manipulation.

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*Abstract of paper read before the Minnesota State Medical Society, June 19, 1902.

The effect upon the heart may be wholly avoided by administering a physiologic dose of atropine prior to the operation. But there is no drug known whose constitutional action prevents respiratory inhibition. Cocaine locally applied, either upon the trunk of the superior laryngeal or upon the laryngeal mucosa, prevents reflex inhibition of the respiration and the circulation.

Slowing of the pulse and slowing or cessation of respiration are frequently observed. This is more particularly true in difficult dissections in closely fitting tumors, necessitating correspondingly greater mechanical disturbance of the superior laryngeal nerve. In a number of cases I have had simultaneous observations made upon the respiration, the pulse, and the blood-pressure. These agreed perfectly with the experimental data; i. e., respiration and the pulse were both slowed, and the blood-pressure fell.

Now, the conventional standard for judging the state of the patient is by the rapidity of the pulse, and its volume and tension. There is under these circumstances good opportunity for misinterpretation. As an illustration: A patient in reduced health is undergoing an extensive neck operation; the pulse has crept gradually up to 140 or 150; the deeper angle between the ramus of the jaw and the mastoid remains to be dissected; during its dissection the pulse drops to 130, then to 120, then to 110, and is of good volume. Almost any anesthetizer would consider his patient improving, yet during this time the sphygmomanometer would show that the blood-pressure is falling, perhaps rapidly falling. The respiration becomes simultaneously slowed, perhaps fails. However, after the operation is concluded and all inhibitory influences are removed, the pulse becomes rapid, of small volume, and low tension.

The immediate correct interpretation of these changes is of great importance to the operator so that he may conduct the operation accordingly.

If the technique involves an excessive amount of vagal manipulation,—as, for instance, its resection,—it is well to inject cocaine into its trunk, distal to the point of severing. I have made unilateral resection of the vagus five times. It did not seem to complicate the case more than increasing the pulse-rate several beats per minute, and producing permanent hoarseness. Pneumonia did not develop.

Bilateral resection is not to be considered. In all the operations extensively involving the vagi, the tendency to respiratory failure is marked. This is best met by alternating applications of ice and heat upon the abdomen or chest, with artificial respiration in extreme cases.

These, then, are the more important immediate dangers of this class of operations. Their prevention will go a long way toward controlling that important consecutive danger, namely, infective inflammation of the respiratory tract.

One of the causes, the entrance of blood into the pulmonary tract during the operation in mouth cases, may be wholly avoided by temporarily closing the carotid and by posture, lessening the duration of the operation, and minimizing the blood loss and shock; and this will leave more vitality to resist infection and increase the chances for recovery.

The inhalation of infective-wound discharges, if no blood has been inhaled, is not nearly so likely to produce an infective inflammation as in the cases in which blood has been inhaled.

If the patient is kept well upon the side, and the mouth cleansed as often as any fluid appears, providing this is done by a nurse experienced in this class of cases, so as to insure against undue annoyances, the danger of infective inflammation is slight.

This introduces the question as to the advisability of a preliminary tracheotomy. This operation somewhat reduces the patient and usually causes on its own account some inflammation, which is occasionally fatal. It prevents the patient's assisting as effectually as he otherwise could in cleansing his mouth. It is always attended by a considerable irritation and usually some coughing. Its advantages must be very considerable to compensate for its disadvantages.

In certain operations in which the upper respiratory tract is occluded tracheotomy is imperative. I use preliminary tracheotomy less frequently than formerly. It gives an advantage in operations so far back in the throat that the wound is not easily accessible for cleansing, and its immediate and natural drainage is into the larynx.

In all the cases in which, by the nature of the operation, pneumonia is probable, I have treated them as though it were sure to occur. The patient's chest is covered with a pneumonia jacket, the air of the room is kept moist and warm, and the patient is placed in the sitting posture early, especially if an elderly subject. When possible he is propped up or gotten up at least part of the time from the beginning.

In the extensive mouth operations, food and water should be given either per rectum or through a small tube introduced into the esophagus. A male cathether serves this purpose very well. In the cleansing and feeding a spray in which there is a sufficient amount of cocaine to relieve the tenderness, is useful. A special nurse night and day; attention to the minutest details; minimizing the dangers of pneumonia, are very essential.

In all cases the removal of the cervical glands in the region of possible metastases should be none the less vigorously done than in cancer of the breast. The technique in attempting to accomplish this may perhaps be best given by describing an operation performed a little more than three years ago upon a patient 51 years of age. The operation was for a cancer of the floor of the mouth, involving the inner aspect of the jaw, the border of the tongue, and the submaxillary and the deep cervical lymph-glands.

Twenty minutes before the operation he was given a hypodermic injection of 1-6 morphine and 1-100 atropine. The common carotid and the internal jugular vein were exposed just above the clavicle. The vein was ligated in two places, and severed between. The artery was closed during the operation by means of the screw-clamp. The incision was then extended upward to a point half an inch below, and anterior to, the angle of the jaw. From this point lateral incisions paralleling the ramus and the body, were continued. The skin was then reflected sufficiently to expose the gland-bearing area of accomplished or of possible infection. The sternomastoid muscle was found adherent to the underlying enlarged glands. It was then severed at its lower end at the point of ligature of the internal jugular vein. Starting below the internal jugular, the deep and the superficial fascia, the sternomastoid, the platysma, the submaxillary salivary gland, all the soft parts from the deep plane of the neck behind, and all the cervical glands including all the gland-bearing tissue, were removed in a block. When the jaw was reached, the part involved was resected by sawing through at two places from the outside, the tongue was split longitudinally, the corresponding side of the floor of the mouth was separated from its attachments, the entire mass including the portion of the tongue, floor of the mouth, portion of the jaw, submaxillary salivary and lymph glands, muscles, fascia, metastases, jugular vein, and other soft parts, were removed in a block. The amount of hemorrhage was but trifling, and the duration of the operation was short. The patient made a good recovery, and after more than three years has had no recurrence.

PUERPERAL ECLAMPSIA*

By Harry Morell, M. D.

LITCHFIELD, MINN.

It is a conceded fact that eclampsia is the most serious and fatal disease to which the pregnant woman is liable; and therefore a consideration of the subject may not be regarded amiss at this time. The writer is extremely sorry that he has nothing original to offer on so well known a topic, but it may be wise and profitable occasionally to review this important subject, and bring out by discussion the different points and best methods of treatment.

No marked advance as to its causation has taken place; in fact with all the recent medical contributions devoted to this disease, there is only a single point as to its etiology that authorities can agree upon, namely, that it is a form of toxemia the nature of which is still undetermined.

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*Read before the Crow River Valley Medical Society, held at Minneapolis, June 18, 1902.

In an article of this description it is not necessary nor desirable to go into the many theories that have been advanced as to the various causes which produce the seizures, but rather to take up the subject from a practical and clinical standpoint. Let us consider for a moment the toxemic theory, as the majority of writers at the present time are inclined to the opinion "that the essential cause of the convulsions is a toxemia produced in all probability by a number of different poisons, associated usually with renal insufficiency and albuminuria."[1] The insufficiency of the kidneys is, as a rule, functional in character, causing a deficiency in the normal rate of elimination, allowing of the accumulation of toxins in the blood, thus starting the whole train of symptoms.[2] Sir Andrew Clarke has described a condition of renal inadequacy due, not to definite changes in the kidneys, but to a deficient elimination through these organs.[3] We must not forget that those who have distinct lesions of the kidneys are also liable to develop eclampsia during pregnancy. The writer had one such case occurring in a woman who had an eclamptic seizure when she was advanced between the third and fourth month. Miscarriage took place, and the mother recovered, and at a subsequent pregnancy she was delivered at full term with no symptoms of this nature.

We should remember that the finding of albumen in the urine of a pregnant woman is not always a criterion of an impending attack of eclampsia, for an enlarged uterus may be a temporary cause of albuminuria from the obstruction to the return of venous blood from the kidneys.[4] It has been stated that one pregnant woman in 40 is albuminuric, and that of these one out of every four develops eclampsia. Eclampsia without albuminuria is of rare occurrence, there being but one case in 10.[5] For positive evidence in favor of the toxemic theory, we should naturally look to the blood and urine of the eclamptic patient. Experimenters were misled for some time by the fact that during eclampsia the urine injected into animals was but feebly, if at all, toxic; while, on the contrary, the urine of healthy individuals is often highly toxic to animals. When, however, the blood serum of eclamptics was carefully studied, and a microscopic study of the organs of eclamptic patients showed, as demonstrated by Winkler, multiple emboli as a constant pathological change, it became evident that the toxins of eclampsia cause convulsions, *because they are absent from the urine and excretions, and present in the serum of the blood and in the organs of the body.*[6]

This line of reasoning goes to show that the particular toxin or toxins is something which is retained in the body, and does not pass out through the kidneys like albumen. Frerichs[7] has shown that urea is converted into carbonate of ammonia in the blood. This has been questioned by some, but for the present we will accept it. Merletti[8] demonstrated that ammonium carbonate in solution causes eclampsia and death in animals, whose organs displayed the lesions often found in eclampsia. An opinion would be formed from this that the toxic substance is *not* albumen, but retention or failure of elimination by the kidneys of urea, or some of the principles of waste, as uric acid, kreatin or some other substance or bacterial poison originating in the organism. S. Marx[9] accepts this view from the fact that he considers that too much stress is laid upon the significance of albumen in urine of pregnant women. He has seen many women go to term with albuminuria, who have not developed eclamptic attacks. He states that the urea is always found markedly diminished in those so-called toxemias of pregnancy or urinemias, and he considers the value of a regular and methodical estimation of urea of the first importance.

The estimated frequency of eclampsia is about one to 500 pregnancies. According to Bartholow[10] it occurs not oftener than once in 150 labors, but particularly in primiparæ and twin pregnancies. In the majority of cases there are certain premonitary symptoms or the pre-eclamptic state; but exceptionally eclampsia occurs without any warning symptoms whatever, coming on suddenly in the course of pregnancy or labor. Two cases of the writer's developed this way during the second stage of labor.

The cardinal symptoms of an impending attack are as follows: Dizziness, edema of extremities, face, and external genitals, headache, which is severe, visual disorders, and scanty albuminous urine, with a lessened amount of urea.

A healthy pregnant woman should pass about sixty ounces of urine daily with a sp. gr. of 1010 to 1016, and the urea should be 1¾ to 1¼ per cent,"[11] or from 20 to 40 grammes. The pregnant woman rarely excretes a normal amount of urea, but less than 1-5 per cent demands attention on the part of the physician.[6] A microscopical examination should always be made of the sediment. "The examination of the urine of pregnant women to determine the presence of albumen alone, in the light of modern investigation, is not sufficient to properly and scientifically estimate the approach of dangerous symptoms. For practical purposes the percentage of urea, the sp. gr. and the amount voided must be determined, and even these only serve as a clinical index of the amount of waste products successfully excreted."[12]

It will be convenient in discussing the treatment to consider (1) the prophylactic, (2) eclampsia occurring before labor, and (3) eclampsia during and after labor.

The prophylatic treatment includes the general rules of health, as fresh air, out-of-door exercise, avoidance of compression of the waist by constricting bands and corsets, bathing, selection of proper underclothing, and the avoidance of taking cold by draughts, etc. The diet should consist of easily assimilated food, having a small amount of waste. Highly seasoned foods, spices, tea, coffee, alcoholics, veal, pork and potatoes must be forbidden. An abundance of milk and water and, as improvement progresses, small quantities of starches and vegetables, with vegetable oils and butter, may be added. Excretion by the skin is favored by hot baths followed by rest in bed, and, in severe cases, it is recommended that the patient be placed in the Trendelenberg posture, and the colon daily flushed with at least two gallons of salt solution. The medication for the stimulation of the emunctories consists of calomel, which acts upon the liver, alternated with Epsom or Rochelle salts or Hunyadi Janos or other mineral waters. Iron in some form is highly recommended; probably Basham's mixture is as good, if not better, than any other.

In eclampsia occurring before labor there is a wide variance of opinion in regard to the treatment. The question naturally arises here, whether or not labor should be terminated, and if so by what method. Those who have been trained under the teaching of the British school of midwifery follow, as a rule, the advice of Gooch, who says: "Take care of the convulsions, and let the uterus take care of itself." Some hold that the induction of labor is positively injurious to both mother and child from increased reflex excitability from irritation, and the convulsions are encouraged from this cause, and that even if labor is terminated the seizures do not cease at once in a great many cases. Then again, there is the increased danger of an instrumental delivery.

There are certainly numerous cases treated from a non-operative standpoint which show excellent results, and which strongly support this view.

In following current literature closely as to recorded cases, there is no doubt that veratrum viride seems to be the most efficient remedy. The utility of this drug was pointed out years ago by Fordyce Barker in his "Puerperal Diseases," and recent experience has proved it to be invaluable in some cases of eclampsia. In selecting the dosage and methods of administration of this drug consideration should be given to the amount which has been advised by different authorities. These reports emanating from British and Colonial writers naturally speak of the preparations of the British Pharmacopea, of which the dose of the tincture is 5 to 20 min., a much weaker preparation than that of the U. S. Pharmacopea, the dose of this being 2 to 5 min. the fl. ext. having the same dose. The method of giving the fl. ext. by the mouth in 15 min. doses until vomiting ensues, is now abandoned, and the hypodermic use of the tincture or fl. ext. is substituted. Some advise the hypodermic injection of as much as ½ a drachm of the tincture at one dose; others advise 10 min. of the fl. ext. hypodermically, with 5 min. doses at intervals of one-half hour until the pulse is reduced. It has been claimed that Norwood's tincture always gives definite results[11]. Saline solution should also be given by the bowel, in quantities from one to two pints, and repeated if necessary.

The writer cannot agree that veratrum viride is an absolute failure, for evidence points that it has its own range of usefulness. Morphine has long been used in this disease. There is no doubt that it allays irritability, and some cases are reported where it alone was used, and the fits were checked, and did not return so long as the patient was under its influence[13]. It should be given with great caution where there is renal inadequacy from Bright's disease. Chloroform is also a very valuable agent, but more useful when eclampsia develops during labor. Venesection is recommended in certain cases when the patient is full-blooded and strong. This acts by diminishing the blood-pressure, and not by removing the toxins. The abstraction of blood and the substitution of saline solution would seem to have a beneficial effect in selected cases by lessening the toxicity of the blood. Chloral, bromides, and other remedies have been used, but they all seem to have the general drawback of acting too slowly.

In the United States most authorities on obstetrics are in favor of inducing labor at the earliest possible moment, taking into consideration the welfare of the mother. Dührssen[3] holds that, as the child is so likely to die in a case of severe eclampsia during the first seven months, pregnancy should be terminated without respect to its viability. All obstetrical[14] manipulations should be performed under the most careful antiseptic precautions, as there is a special tendency to sepsis in these cases.

When the eclamptic attacks occur during labor, all agree that labor should be terminated as soon as possible.

In those cases where delivery has taken place, and the seizures continue, it may be necessary to use saline infusions under the breast or in the abdomen, in quantities of from one to three pints. This, Jardine[15] believes, has a diuretic effect, which flushes the system, dilutes the poison, and stimulates the patient. Here he is speaking of the treatment before delivery, but the writer is of the opinion that this form of treatment would be especially useful in attacks following delivery. Morphine, chloral, and chloroform are of great service in this stage also.

It will be seen, on reviewing the subject, that no hard and fast lines of treatment can be laid down, for each case is a law unto itself; and at this time when the pathology and causation of eclampsia have not reached a definite basis, the practitioner will have to judge for himself the particular form of treatment which is best suited to individual cases.

BIBLIOGRAPHY

1. George L. Broadhead, Medical News, May 6, 1899.
2. T. W. Eden, Amer. Jour. of Obstet., Sept., 1901.
3. W. A. N. Dorland, Phila. Med. Jour., Jan. 4, 1902.
4. Lauder Brunton, "Disorders of Digestion," McMillan Co., London.
5. F. Spurr, Lancet (London), June 16, 1900.
6. E. P. Davis, American Gyn. and Obstet. Journ., July, 1899.
7. "Bristowe's Practice of Med.," 7 Ed., Smith, Elder & Co., London.
8. Arch. Wal. di Gin., Dec. 31, 1898, cited by E. P. Davis.
9. S. Marx, Medical News, June 30, 1900.
10. R. C. M. Page, New York Med. Journal, May 12, 1894.
11. Jos. B. Lee, Obstetrics, Aug., 1899.
12. R. C. Norris, American Gyn. and Obstet. Jour., July, 1899.
13. G. E. Fitzgerald, British Med. Jour., Nov. 24, 1900.
14. Dr. Taylor, American Gyn. Ob. Jour., Aug., 1901.
15. R. Jardine, British Gyn. Jour., Aug., 1901.

PNEUMONIA*

By Roscoe N. Jackson, M. D.

FARIBAULT, MINN.

A disease which resists all modern methods of treatment so successfully as pneumonia, is entitled to our consideration, but before proceeding to the treatment proper, let me state some premises.

I believe in accurate, scientific methods, as taught by the microscope and bacteriological laboratory. I was educated in the laboratory, but I want to protest against a *part* being made greater than the *whole*. We protest against faith cures, Christian Science, and the various pathies for claiming to be superior to the practice of medicine, when they are really only a very small part of it; and yet do we not come pretty near the same foolish error in our present devotion to so-called exact science? We are bowing before it to the abandonment of some of the sense we should have been born with. A youth goes into a laboratory, stays just about long enough to shed his swaddling-clothes, and then sticks his head out of the window and yells that bleeding, or this, or that, is not scientific, "Drop it!" and we drop it quicker than a "jumper" from lower Canada, and drop our jaws, too, and throw up our hands and look as guilty as a lot of hypnotized criminals.

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*Read before the Minnesota Valley Medical Society, May 6, 1902.

At a meeting of the New York State Society a year or so ago, a large number of the ablest men in the east discussed pneumonia. They all agreed that the mortality was greater than fifty years ago. The old practitioners, who formerly treated the first or congestive stage by venesection all said they got better results then than now, and the reports of the Massachusetts General Hospital were cited to prove it all, and the young men who usually bank more on a hasty laboratory course than on anything gray hairs can tell them, and who think that because they can see a germ through a lens they know how to kill it, actually spoke out in meeting—God bless them—and said they believed the old boys were *it;* and yet we dare not bleed to-day for fear that a fellow will yell "drop it" so loud that the public will hear it. The fearlessness that made heroes and valuable investigators of our medical forbears, is all lost to-day in our worship of exact science, to the neglect of bedside observation and a good use of our reasoning faculties. Let us combine the two, as we should, and be complete men.

We younger men have heard old and able men discuss the treatment of diseases before our time, and as we listen with a fair mind, it is not difficult to see wherein we are in advance of them, and it should be as easy (if we can lay aside our preconceived notions, which are our prejudices), to see where they beat us. In pneumonia we certainly are left, for the disease is not new nor different from what it was then. Effect follows cause, and if our results are poorer than theirs, the only logical deduction is that our modern treatment is worse. As long as we have to accept this fact, let us do it gracefully. The first step toward learning is to learn what we can learn.

Andrew H. Smith, in the "20th Century Practice of Medicine" says, what we all know, that in pneumonia we have an infectious disease with a germ to fight; that treatment must be directed toward destroying or inhibiting the action of this germ; and that the only remedy he has ever been able to give in sufficient quantity to do any good without damage to the patient is sodium salicylate. He is very emphatic, and says it is the rational and only treatment, and nothing else is of any avail. Now, I have been treating pneumonia with this drug for twenty years with what I call mighty good results, and you can imagine my pleasure on reading Prof. Smith's article, for whenever I have advocated it to any fellow practitioners, they have laughed at me, or wagged the head wisely, and said too depressing, "not in the books," or some such foolish thing. Now that it is "in the books," promulgated by so good an authority, I hope they will not be afraid to try it. I have met men in our profession who seemed to have traded their reasoning faculties for their diploma, and ever after stuck to the books. They seem to prefer scientifically furnished funerals to convalescent patients.

Now, how does pneumonia kill, and how does sodium salicylate act? In the first place, four or five days of fever do not kill, even when very high. Look at erysipelas and typhoid and other high and protracted fevers. Fever is nature's effort to throw off poison, and to hold it down with coal-tar products, cold bath, etc., is like holding back the horse that is pulling you out of the mire.

In the next place, the germ of pneumonia does not kill. We have learned that it is the excretion of the germ, the ptomaine or toxic element thrown off by its activity and circulating in the blood, that kills. Pneumonia patients, like those with any other septic disease, die of blood-poisoning.

As the germ itself cannot be killed, and as we know it is short-lived, so let it go. If we can inhibit its activity, lessen its poisonous product, and sterilize it, so to speak, as it enters the circulation, we conserve the life of our patient. This is what sodium salicylate does. Look at the composition,—a combination of soda (we all know the value of alkaline treatment of inflamed mucous membranes) and salicylic acid, which is a synthetic product of carbolic acid, or phenol, which is an internal antiseptic of more power than most of us realize. Some think that the most of the good results of the various antitoxines is due to the carbolic acid in them. Sodium salicylate reduces fever promptly by inhibiting and sterilizing the toxic excretion of the monococcus pneumoniæ. Stimulants and drugs that whip up the circulation in the first or congestive stage, are Mr. Coccus' best friends. They help him get a better hold than he could have gotten alone. The venesection of the old practitioners lessened the amount of poison in circulation, and to that extent was scientific, but so long as that youth in the laboratory is yelling "drop it," we dare not do it.

How many, many times have we all been called to see a case of pneumonia that has safely passed the crisis, and we wonder how the patient escaped with his life. It scares me sometimes when I think that the reason he escaped death was because he first escaped the doctor who believes in the "strenuous" treatment of pneumonia. The hot drinks and poultices and sweating that he got at home, were much more scientific eliminants than the drugs in use to-day. We have all heard of the man who died of fever and Dr. Blank. Too many of our patients to-day die of pneumonia and stimulants and strychnia and digitalis.

When pneumonia is giving a man about as big a run for his life as he can stand, how many extras, in the name of common sense, in the way of jags and excited circulation and irritated nerve-centers, do you think he ought to take on? And when he dies we say, he had had the latest treatment, we followed "the books," we got him by the crisis, but his heart played out. He died in sight of the goal. If he could only have stood a little more, he would have pulled through. We seem to feel that it is a dirty Irish trick in a man's heart not to be able to stand a pneumonia, and a drunk, and enough strychnia and digitalis to kill a horse, and come through it all and pay a glowing tribute to scientific medication.

The driver that wins the race saves his whip till the home-stretch. If stimulants and strychnia and digitalis are to do any good, they must be withheld till needed. We all know what pneumonia does to the inveterate drinker. One died in our town lately in the prime of life in just three days.

The last Year-Book contains what I have quoted from Prof. Smith, and several report good results from creosote, which, of course, works like the sodium salicylate, for phenol is in them both, and we know its effect in other septic conditions, such as tuberculosis and typhoid. The sodium salicylate, however, is a good diaphoretic, and, no use denying it, a sweat, or bleeding, or anything that will eliminate poison, is a good treatment. Let us, then, go back to well-grounded principles. In the first stage, do we give anything that will diminish the congestion? Bleeding and sweating always did do it, and probably would again, but we are stopped by fashion.

Give veratrum for the hard pulse, gelsemium and bromides for the motor excitement and frequently a little Tully's powder is best of all. Aim to keep your patient quiet, and save his strength and heart-work. A drug I like very much is belladonna. It diminishes lung congestion, sends blood to the surface, and allays irritation at the nerve-centers. Through it all, from beginning to the crisis, give your antiseptic sodium salicylate in 5 grain doses, more or less, every hour. You will find you care little for outward applications, except to gratify your patient or friends. Don't feed any patient that has pneumonia or any other high fever. A hot stomach simply ferments food, and distresses the patient with gas. They get no nourishment out of it. Give them all the water they want. I often give coffee clear with no trimmings. It works better than stimulants in pneumonia. Don't, I beg of you, give stimulants early, and be discriminating about it. Most of the cases I treat that way, get none at all until convalescent. Stimulants and strychnia and digitalis are tax-gatherers, and every dose exacts something of a pretty busy heart. They will not cure the poison of pneumonia any more than they will the poison of a snake-bite; and remember that poison is what kills your patient, and what you are there to fight.

HAAB'S MAGNET IN EYE-WORK.—The old Snell magnet is too weak to be of much use, writes Richard Williams (Liverpool Medico-Chirur. Jour.), but by its great strength, Haab's magnet may be a source of danger. He reports two cases of the extraction of pieces of steel from the inner chamber of the eye by this magnet, the power of the magnet being so great that it caused bulging of the tissues when they were too dense to be perforated by the piece of steel. In one case the foreign body was drawn right through the iris, with considerable bleeding into the anterior chamber, and, on account of bulging of the cornea, there was dangerous lateral collapse of the globe.—Med. News.

THE PIONEER DOCTORS OF THE MINNESOTA VALLEY*

By J. W. B. Wellcome, Sr., M. D.

SLEEPY EYE, MINN

SECOND PAPER

DR. CARL WESCHCKE, OF NEW ULM

Dr. Weschcke's biography was given to me. He was born in the province of Saxony, Germany, in 1831. His educational career began at home at the age of five, and he finished the elementary course at the age of 13. He then entered the gymnasium at Nordhausen, and in eight years graduated from this institution. He then began his medical course at the University of Berlin, where he spent 18 months, and next followed his studies at the university of Greiswold for 2½ years, graduating there in the spring of 1856, at the age of 35. Upon leaving the University he served as assistant surgeon to the 32nd Infantry Regulars for one year. Then followed two years of private practice.

America appearing to the young doctor as a fair field of promise, he bade farewell to his native land in 1860, and came to New Ulm, Minn., and commenced the practice of medicine. The town then contained about 500 inhabitants. He was the only physician there up to 1867. In August, 1862, came the horrors of the Sioux Indian massacre. Those never-to-be forgotten six days of battle acquainted the doctor with the hardships and heroism of frontier life. During those six days of war Dr. Weschcke made himself useful by caring for the sick and wounded. The horrors of this scene have been published to the civilized world.

From 1862 to 1863 he served as assistant surgeon in the U. S. army, caring for the sick among the soldiers stationed at New Ulm and outposts to protect the settlers against the Indians. In 1868 the doctor left for San Francisco, returning in October of the same year. During his absence in California he contracted intermittent fever, which compelled him to relinquish the glorious prospects in California. He again resumed his practice in New Ulm. He also bought a drug store, first opened it in 1866, and remained at the less arduous labor of druggist until 1889, continuing the practice of medicine among his friends for a short time only.

In 1881 a cyclone struck New Ulm demolishing his drug building and entailing great financial loss. In 1901 the State Pharmaceutical Association elected him an honorary life member, he being the pioneer druggist of New Ulm. He has always figured prominently in the politics of the city. For a number of years he served as a member of the city council and school board. In 1878 he was elected mayor for the first time, and was re-elected eight times to this post, serving 15 years. He has seen the city grow from five hundred people to six thousand, its present population. The writer well remembers Dr. Weschcke

There was a call for the physicians of the valley to meet on the 25th day of February, 1865, to organize a medical society in the city of Mankato. The call reached Dr. Weschcke's ears at New Ulm. On the day appointed for the meeting the rain was pouring down in torrents, the streams and rivers were high, the ferry-boat at Mankato was carried away, and we little thought that Dr. Weschcke of New Ulm could possibly be with us. Just before we opened our meeting we saw from Main street a lone man on horseback advance to the river's side. He plunged his horse into the water, and it swam splendidly across the river. We met him on the Mankato side, and, behold, to our astonishment it was young Dr. Weschcke of New Ulm, as wet as a rat. The doctor stayed with us two days, and assisted in organizing the first medical society of the Minnesota Valley, called the Minnesota Valley Medical Society.

The doctor has always been popular in his own city and county. He is now 71 years of age, and his years rest upon his shoulders kindly. He is the present mayor of New Ulm.

DR. L. C. CUMMINGS, OF LAKE CRYSTAL

Dr. Cummings took his degree of Master of Arts at Harvard, in 1853, and graduated from the

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*Read before the Minnesota Valley Medical Society, May 6, 1902.

Medical University of Pennsylvania in 1856. He entered the employ of the Cunard line of steamships two years later, and made 23 trips in this service as ship-surgeon. He was then appointed surgeon in a Pennsylvania regiment, and served until 1865, when he resumed practice in the city of Philadelphia, where he remained until 1868. He then came west, and located at Lake Crystal, Blue Earth county, Minn., where he practiced until 1883, when he located at Brown's Valley where he continued practice until his death in 1896. He was a gentleman and a scholar, well read in his profession, and a useful and intelligent member of his profession and of society. He performed many operations, and prescribed far ahead of his time. He is a man to be remembered and honored by the medical profession.

DR. JOHN P. HUMES, OF WINNEBAGO CITY

Dr. Humes has lived in Winnebago City for the past forty-five years. He came there from Meadeville, Pa., in the fifties. He studied medicine with Dr. Lockwood, who was located at Winnebago City for a short time. At the close ot the war in 1865 he entered Rush Medical college, from which he graduated in 1867, and has practiced his profession in Winnebago City ever since. He is one of the leading physicians and citizens of Southern Minnesota, an enterprising, honest and large-hearted man, and has been a very successful physician, who was always ready to do his duty without fee or reward in the early days of his practice. I think no man can justly find fault with our old pioneer, Dr. Humes, who has the respect of all the physicians in the Minnesota Valley. Long may he live in the enjoyment of good health, and the use of his mental faculties. He is at the present time first vice-president of the Minnesota State Medical Society, is a member of the American Medical Association, and of the Minnesota Valley Medical Association.

DR. ZINA G. HARRINGTON, OF MANKATO

It is a pleasure to write the history of a man who stands so high with all the medical men of the Minnesota Valley. Not only does he stand high as a medical man, but as a gentleman in every sense of the word. He is a good samaritan, is respected as a neighbor, and is a man in whom the people have implicit confidence. He is a plain, intelligent family physician. He has no ambition to gather in the laurels that come to those who seek public notoriety at the expense of others.

He graduated at Albany Medical College in 1857. After a few years practice in Vermont he came to Mankato.

The doctor is an excellent citizen, as the people of Mankato will bear me witness. In 1898 he felt it his duty to take a vacation, and accompanied by his wife, he made a tour of the Holy Land.

He is a great student, and has taken a number of post-graduate courses at Harvard. He is a member of the Minnesota Valley Medical Association, the Minnesota State Medical Society, and of the American Medical Association.

DR. CHARLES WARNER, MANKATO

I wish to state in writing up the biography of this gentleman that I have had but very little personal acquaintance with him, which I very much regret. However, I know something of his reputation as a physician and surgeon since he came to Blue Earth County in 1865. He has the reputation throughout this Valley of being a first-class physician and surgeon. He has held the position of surgeon for the Sioux City Railroad Company, and has been counselled for years by physicians outside of the city, and assisted them and operated for them in many surgical cases. I think that I voice the sentiment of the people of the Minnesota Valley when I say that he has been a hard worker and has earned the reputation which he enjoys. He came to the Valley after the Indian war, and did not go through all the hardship which the pioneer physician met, but he has been through many hardships in the early days of his practice here, and has seen many changes since he came to Mankato. He graduated from Jefferson Medical College in 1854. He is a member of the Minnesota Valley Medical Association and of the American Medical Association.

DR. WILLIAM R. MC MAHAN, OF MANKATO

Conspicious among the honored residents who lived in the Minnesota Valley in 1855 and since that date till his death, was the well-known William R. McMahan. For a number of years his health had been poor, the immediate cause of his death being malignant cancer that developed in the side of his neck and head.

He was a native of Kentucky, and was born in

1816. He moved to Indiana in the early twenties, and commenced the study of medicine at an early age with Dr. McCullus, at Jasper, Indiana, completing his education at Louisville, Kentucky. He moved to Ottumwa, Iowa,.and later to Dubuque, where for years he had a large and lucrative practice, establishing and conducting a hospital in that city. In 1855 he moved to Mankato, and has always been considered the pioneer physician of Blue Earth county. There is scarcely an old settler who does not remember Dr. McMahan. Settlements at the time he commenced practice were far distant apart, and houses less numerous, but the weather was never too sold or severe to prevent him from responding to sick-calls. If his patrons could not or did not pay for his services he never forced them. He had the reputation of being a poor collector, and often borrowed money to keep the wolf from the door when thousands were due for his services, and when in justice to himself he should have resorted to law to collect his just dues. Had he been a good collector he would have left a fortune to his children, but, instead, he certainly left the record of a man of a generous and kind heart and good deeds.

To digress a little, I wish to state that Dr. McMahan had the honor of being elected from Blue Earth county to the Minnesota Constitutional Convention. About this time he visited Washington, D. C., representing the territory in some capacity that I do not now remember. In the course of his long practice he fitted many young men for medical college, among them being two of his sons, Dr. Joseph McMahan, who graduated at Rush Medical College in 1877 and died at Spokane Falls in 1883, and Dr. James C. McMahan, who graduated at St. Paul Medical College in 1876, and is now practicing medicine at Sioux City, Iowa.

At the outbreak of the Sioux rebellion Dr. McMahan went to New Ulm, and was there through the siege, attending the sick and wounded. When that place was abandoned, he drove back to Mankato where he established a hospital, to which the unfortunates were brought. He was active and vigilant throughout the Sioux War and ready at all times to assist the wounded and afflicted.

Dr. McMahan performed a number of successful surgical operations in Mankato. He performed lithotomy a number of times in the early days of his practice. He was a man of excellent judgment and a very fine diagnostician. He was a member of the State Medical Society.

DR. J. H. JAMES, OF MANKATO

Dr. James was born in 1846 in Greenwich, New York, and graduated from the Medical Department of the University of New York City, in 1875. His great ability and reputation earned in practice in large institutions, gave him the appointment of assistant physician in the hospital for the insane on Blackwell's Island, New York. In 1875 he was appointed assistant physician of the Minnesota Hospital for the Insane, located at St. Peter, which position he held for fifteen years. He was known at the hospital as a man who never betrayed his trust. None of the insane inmates of this institution who have recovered from their insanity but have a kind word for Dr. James, who was always untiring in his efforts to make comfortable all under his care. I was once told by the superintendent of this hospital that Dr. James had great skill in treating mental diseases, and in his opinion he was far above the average of physicians holding such position. It was expected by many that he would be finally appointed superintendent of the St. Peter hospital, and he would have had the position which he had well earned and was so competent to fill, had it not been for political red tape. But we can not complain for we now have a man of excellent ability in the position. Dr. James is a specialist in diseases of the ear, eye, and throat. During his residence in Mankato, he has gained the confidence of the people, not only of this city, but throughout the Minnesota Valley. He is considered an excellent diagnostician, and he honestly gives his opinion to the patient that is under his care, showing no disposition to mislead. He has one of the best equipped offices in the city of Mankato. His charity and kindness are proverbial with the citizens. He is modest and retiring in his manner, and does not seek notoriety. He has been president of the Minnesota Valley Medical Association of which he is a member, and he is also a member of the Minnesota State Medical Society and of the American Medical Association.

SQUINT AND OTHER MUSCULAR ANOMALIES*

By Edward J. Brown, M. D.

MINNEAPOLIS

At the 1898 meeting of this society at St. Paul, in a paper on squint, I reported the somewhat brilliant result of a partial tenotomy of a superior rectus muscle in the cure of a hyperphoria of 2° and esophoria of 23°, the immediate result being vertical orthophoria and esophoria of 5°. At the end of two weeks there was an esophoria of 2.5° with sursumduction, right and left, of 2.5°, and abduction of 1°. Unfortunately, the family was very poor and greatly afflicted, in consequence of which subsequent treatment was neglected, with the result that the girl was soon squinting nearly as badly as ever.

In presenting this supplementary report, I wish to use it as a text to enforce the fact that squint can seldom be cured merely by an operation. One of the best men in the West remarked, not long ago, that he seldom operated on a case of squint till the patient had been under his treatment and care for three years. Family physicians and parents should be impressed with the fact that a squinting child should be placed under the care of a competent ophthalmolgist at the earliest possible date after the squint has appeared. A child three months old who squints should be treated, at least to the extent of having its good eye bandaged one or more times daily, in order that the vision of the squinting eye may be properly developed. Neglect to do this will probably lead to defective development and vision of the squinting eye, and to false or excentric fixation, which may render a later cure difficult, if not impossible.

The exact refractive error may be determined even in very young children by means of retinoscopy, and appropriate glasses should be ordered in case of children three years old or, in exceptional cases, even younger. It should be distinctly understood that inability to determine the refractive error in such cases by objective means, renders the physician or oculist incompetent to treat them. A vast amount of patience is needed both by physician and parents to save these little ones the normal use of their visual faculty in the way of binocular single vision, but the effort is well worth while. The bandage, suitable correcting glasses, atropia and the stereoscope will tide such children over the most dangerous period, allowing time for the development of the necessary impulse toward normal vision. Many will be cured, and others will later require exercise of special muscles to develop their innervation, while some few will require operative interference. As a good illustration of what may be done in older subjects, I will report the following:

Mrs. W—, aged 52, came to me March 22, 1902, complaining of pain in the back of the head, aggravated by any use of the eyes. She was in good general health. Following a season of overwork, and without other obvious cause, she found herself the subject of diplopia, which lasted for two years. During the succeeding four years she has suffered greatly from pain in the back of the head. She had learned to get single vision by turning the head to the right or left or down. With the head straight there was crossed diplopia, the left image (that of the right eye) being fainter and lower. The phorometer indicated right hypertropia, 9°, and exophoria, 3°. Vision was 20-xx in each eye, and decidedly improved by R-.25 cyl., axis 45° nasal. L-.25 cyl., axis horizontal. There was a considerable area of old choroido-retinitis in the outer periphery of the right eye. Rotations were, upward 28° and 30°; downward, 42° and 45°; torsion of right eye, 6° out; of left eye, zero. These findings indicated a probable paresis of the right superior oblique. After a few days' exercises with prisms, she was able to fuse images with 2° prismatic correction of vertical error. For the past two weeks she has been wearing, with great comfort, for distance, her quarter diopter concave cylinders, with which she has 1½° right hyperphoria.

While I have no word of criticism for properly performed operations on the muscles, I am convinced that most of such operations are done with too little consideration; that many of them might be entirely avoided with great advantage to the patient; and that altogether too many of them are to be considered as cases of malpractice.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

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JULY 1, 1902

MINNEAPOLIS OFFICIALS OF THE A. M. A.

Dr. J. E. Moore, of Minneapolis, was selected chairman of the Surgical Section of the American Medical Association for the coming year.

The honor is great, and the Lancet extends its congratulations.

The work of the chairman of a section of this magnitude is very exacting and laborious. To make the section a success, it is necessary to secure contributions from men of recognized standing, and to arrange the program in an attractive manner.

Dr. F. C. Todd, who is secretary of the Ophthalmological Section, will have an enormous correspondence during the year; but the position is worth all the labor.

Dr. J. H. Dunn, a vice-president, has the honor without much labor on his part.

The physicians of Minneapolis are very much gratified at the selection of three of her prominent men for offices in the A. M. A.

The next meeting of the association will be in New Orleans some time in May, before the intense heat of the South is burdensome to men from the North and East.

STATE MEDICAL SOCIETY

The last convention of the season is over, and many sighs of relief are abroad over the State.

The 34th annual meeting was a success in many ways, particularly because of the adoption of the changes in the constitution and by-laws.

In point of numbers the attendance was below the average, except on Thursday evening at the "smoke social," at which the usual turn-out was present, and illustrated the popularity of the social side of the meeting. Men who took no part in the scientific work were conspicuous in the fraternal meeting, where old acquaintances were renewed and new acquaintances formed.

Doctors like a bit of variety, and the relaxation from the grip on a knife or the relief from ofttold tales that are so frequently heard by day and night, makes the man a boy, ready for amusement.

The scientific program was evidently a success. The papers were uniformly good, and the sessions well attended. The evening session of Wednesday was particularly interesting in point of attendance, the audience staying in the room until the last paper was finished. The discussions were vigorous and timely.

The event of the meeting was a paper by Dr. George Crile, of Cleveland, Ohio, on "Some Operations for Malignant Disease of the Mouth and Neck," of which an extensive abstract will be found in this number of the Lancet.

Dr. Crile is one of the advanced surgeons of the country. His experiments on blood-pressure in animals and his surgical skill have attracted attention among scientific men.

Personally, Dr. Crile is delightfully approachable, and his manner and presence won the admiration of the society.

The address of the president, Dr. W. A. Hall, will be given in full in the Lancet of August 1. It contained much wholesome suggestion and advice. Its keynote was the cultivation of closer fellowship and better understanding in the profession.

Dr. J. W. Andrews, of Mankato, was elected president for the ensuing year; Dr. Thos. McDavitt, secretary, and Dr. R. J. Hill, as usual, treasurer. In response to a request for a speech from Dr. Hill, after his unopposed election had been vociferously announced, he stated in clear and emphatic tones that "All members in arrears for their dues would be promptly dropped."

The meeting place, the Unitarian Club, has a delightful auditorium, but the outer vestibule proved a fine place for meeting friends, telling stories, etc.; and frequently the smaller meeting was more in evidence than the real scientific section, so that occasionally the presiding chairman had to send out a polite request for more quiet.

CHRISTIAN SCIENCE LITERATURE

According to the Literary Digest for June 21, the Mexican Herald gives a Christian Scientist's view of the Martinique catastrophe. The writer "sees nothing in the late volcanic upheavals that is necessarily in conflict with the idea that 'God is good and God is all,'" and that, since evil is thus excluded, "there is no storm, no fire, no flood, no earthquake." "God never made those things, and they are therefore unrealities."

He maintains that God did not permit the destruction of St. Pierre, and knew nothing about it, that these horrors and catastrophes that have been reported from time to time through the press are "mind-pictures" that have been latent for ages; "that mortal mind in man is apt to any phase of evil, and the law of earthquakes and other like phenomena is human-made."

Probably some mortal who lived in St. Pierre and who knew nothing of Christian Science, became filled with what his mortal mind thought was corn-juice, and who in his exaltation and error attempetd to kick the top off Mount Pelée, then conceived the idea of transmitting his "mind-picture" to the world by the Marconi system, and thus the false news has spread. There was really no eruption, no fire, no gas, lava or destruction of life or town: nothing happened but the "mind-picture."

Read the description of a Christian Science meeting on another page of this issue by one who attended in person. It is a sample of the usual mind-picture that the average Christian Scientist is made of. Really, there is no such thing as matter, hence there are no real Christian Scientists: they are only "mind-pictures."

THE NEW CONSTITUTION

The constitution adopted at the meeting of the State Society this month was the work of men who made a careful analysis of the society's needs. The report of the committee was adopted without debate, thus endorsing the personnel of the framers, and the acceptance of their ideas.

The change in the constitution and by-laws is in accordance with the constitution of the A. M. A. It was demonstrated early in the meeting that various minor changes may be necessary from year to year until every part is adjusted for smooth work. The burden of the work is placed on the county societies, and to them the state society must look for its ultimate success. The men who are admitted to a recognized county society are practically members of the state society, and, on the additional payment of fees, of the A. M. A. Consequently there is urged upon the various county societies the necessity of careful selection of candidates, men who are reputable in the community; whose moral and professional worth is established; who are legally qualified and registered, and who practice non-sectarian medicine. These are broad grounds for admission or refusal, and the societies must be broad enough to overlook personalities in their selection of applicants. It is to be hoped that every county will have its own society after a few years. Until that is a possibility district societies will be recognized, provided they do not extend over too wide an area. The treasurer of each local society collects the dues from its members for the state society. The treasurer of the state society collects dues from applicants who are not members of a county organization.

The report suggests the appointment of a state organizer, who shall assist in the building of county organizations. To him all questions in dispute are to be referred.

Adolescent Heart Strain. — Adolescent heart strain is due to a want of muscular power of the cardiac muscles only, especially the musculi papillaries whose weakened condition permits of the regurgitant murmurs heard at the apex. The bruit present at the base is secondary to anemia of the general system. Treatment should consist of rest in bed, seclusion, the administration of digitalis pushed until one has the physiological effects, and strychnine, preferably in the form of the tincture of nux vomica on account of its stimulating and appetizing properties.—The New Zealand Med. Jour.

CORRESPONDENCE

AT A CHRISTIAN SCIENCE MEETING

Minneapolis, June 8, 1902.

Editor Northwestern Lancet:

I studied "Science and Health" most assiduously last winter with much hope and with no small degree of confidence that I might find someing of the Scientists, and I went into a meeting of the Scientists, and I went in no critical mood, but I came away with eyes opened. I feel quite incompetent to describe this meeting as graphically as it should be detailed to a medical audience—I am too deficient in the "Eddyism" language, but the readers of the Lancet shall have an opportunity to see it vaguely.

To me it all seemed very paradoxical, and when I told my Science friends how it impressed me, they exhorted me to devote even more time to the study of it, reassuring me that in the near future the "understanding would come, and the glorious light of Christian Science would be revealed to me," through my perseverance. But my study was in vain. The more I perused it, the more obscure it became. I decided that "Science and Health" was either too abstruse or that I was too obtuse, and further study would be a waste of time. My friends became alarmed, for they grieved greatly because I was living in such darkness (?) and ignorant of the healing (?) power of the present century. They were positive that I would receive much enlightenment if I attended the Science meetings. Having become rather curious I decided to take another step in my search for the "Truth." So on the following Wednesday evening I attended their testimonial meeting. Of course the first person that attracted my attention was a lone gentleman sitting in front facing the audience. He was a tall, cadaverous-looking creature, a perfect picture of imperfect health. I immediately concluded that the healer must be going to give a public demonstration of her healing power and he was the patient, but at eight o'clock this same gentleman rose and opened the meeting. Imagine my surprise when I learned that he was the Scientists's Reader, and had been enjoying perfect health for years. My first thought was, "Truly, looks are certainly deceiving." After that I felt prepared for almost anything. In a high, lisping voice he said he would read a portion from the Scriptures. This was done in a most matter of fact way. When he finished, he picked up "Science and Health," looked upon it admiringly, and with countenance, beaming and wreathed in smiles he lisped: "And now I will read a 'portion' from 'Science and Health' written by our beloved leader, Mary-Baker-Eddy."

The meeting was then open for testimonies. I never saw as many people together quite as anxious to tell the public *all* about their past sufferings and many narrow escapes. I say *all* about them, for it seemed quite impossible for them to relate their trials and tribulations without going into detail, telling things which the average person would consider of little interest. I can't understand why such testimonies should be given, for Mary Baker Eddy in "Science and Health" strictly forbids her followers to ever discuss "Sin, Sickness, Error, or Health," since they do not exist, except to the mortal mind. Yet these four forbidden subjects are the ones most frequently mentioned. To be sure they always end by returning thanks to the "One" altogether lovely who has given so many a new lease of life, and this no doubt in the eyes of a devout Scientist removes the curse.

When the meeting opened several were on their feet at once, but seeing a scrawny, frail-looking woman, who positively looked as though she would not have the strength to rise the second time, the others sat down, and in a trembling, hollow voice she gave the following testimony:

"I am a lace-maker here in your city. I have living with me my "darter" and son-in-law. I am strong and well enough to do all my own work, besides my lace-making. Yes, I wear glasses, and carry a cane as you all see, but I don't need to—I simply use them because I miss them if I don't, and they are company for me. Well, I started out to tell you about a most painful experience I once "hed," and since I came into Science, too. One Monday morning I was going to do my week's washing. I "ris" up early, got my "darter's" breakfast, and started her off to work. Her husband, my son-in-law, imagines he is sick and can't work, but I think he is lazy. Well, I have wandered off again I see. My intention was to wash that day. I started down cellar with the lamp in my hand. The stairs were very steep, but of course that wouldn't bother us Scientists for our way is never steep. I was going down after my wash-boiler. When I got nearly half way down the lamp began to shake, and at the same time my ankle turned and I slipped. I was determined not to let the lamp fall, so I gave it a treatment. Divine Science had taught me that there was no sensation in matter, so had I slipped or fallen even it wouldn't have caused me any pain had I but thought it wouldn't. There may be no sensation in matter, but I was wise enough to know that if my lamp fell that would create a sensation, but my treatment saved it from falling, and then, I don't know why, nor I have never found out, I began to think about my sore ankle. The more I thought of it the worse it became, for the "mind governs the body" always in science. Instead of going right on down after my boiler, I crawled back upstairs. I was in great pain. I thought I was I should say, and I had forgotten to treat my ankle until it was beyond my power. I got my cane next and hobbling around tried to work, but still it pained. I then removed my shoe, and put on a slipper thinking it would be easier. What an absurd notion. It makes me smile when I think of it now. Of course in humoring myself I sinned in Science, and wasn't it most natural for my ankle to cause me more pain, but of course it hurt me only to my mortal mind? When my son-in-law, who, by the way, thinks he is a privileged character round home,—well when he came down to breakfast about eleven o'clock, he noticed that I was limping badly, and he said: "Marm, what's the matter?" Then I set down, and human-like, I had to tell him the whole painful experience, and this is just where the worst of all errors came in. I hed no business talking about it, but I did. When I finished I tried to walk and couldn't. When my "darter" came home I erred again by telling her all about it. She sent at once for my healer, who gave me a treatment, and later the same night she gave me an absent treatment. The next morning found me still unable to walk, and the healer came again. She gave me "Science and Health" to read and told me not to get up for a day or two, but to remember that there was no pain in my ankle. By the end of the week the treatments began to take effect, and a week later I walked as well as I ever could. Thanks to the "Science and Health," and to our beloved healer, Mary Baker Eddy."

Many others who were basking in the unmitigated sunshine of Christian Science followed with testimonies, but there was a great deal of sameness about them, and they varied only in absurdity.

The meeting closed with words of praise to Mary Baker Eddy, and those who had not had an opportunity to tell their experiences "in meeting" gave the individual non-believers the benefit of them. It was not a healthy-looking audience by any means. In fact, I never saw a more sickly-looking lot of well people. They believe that Christ was perfect, and created man in his own image. They claim that he is reflected through them spiritually, mentally, and physically, yet what poor exponents of their belief these people in perfect health are. Of course the body, their temple, after all, is of little consequence to them, and I am too mundane to see things through a Scientist's eyes, and the "understanding" is "not mine."

* * *

BOOK NOTICES

An American Text-Book of Pathology.—Edited by Ludvig Hektoen, M. D., Professor of Pathology, Rush Medical College, Chicago; and David Riesman, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic. Handsome imperial octavo of 1245 pages, 443 illus-
Dr. S. E. Finley, of Wilmington, Delaware,
trations, 66 of them in colors. Cloth, $7.50; sheep or half morocco, $8.50 net. Philadelphia and London: W. B. Saunders & Co.

The difficulties of condensing into one volume the immense subject of general and special pathology are readily appreciated, and the authors of this text-book are entitled to the thanks of every practitioner in the land, as well as to those of the medical students for whom such a book is primarily designed, for the work they have done.

All who have taught pathology know the difficulty of getting any one volume which will answer as a text-book, most works on this subject being either too voluminous or covering only part of the desired subject-matter. The work under discussion seems to hit a happy mean, and is condensed without omitting important details; and it is certainly in most respects up to date, a most difficult position to attain in a subject whose progress is so phenomenal.

As usual in a work by a number of authors some parts are better and some not so good, although the sections which fall under the latter class are not numerous.

Any attempt to review in detail such a work as this involves an amount of study which I have been unable to give it, although the time thus spent is devoted to a worthy and self-rewarding task.

The rather superficial examination which I have been able to give this work, leads me to commend it as a whole most highly. General pathology has been treated in a most masterly though concise manner, and there is little to criticise. The subject of tumors is treated in a wonderfully condensed yet complete manner, which leaves little to be desired. A step in the right direction is taken in classification in removing sarcoma from the connective-tissue class, and considering it with the malignant tumors. This seems a most rational point of view, for malignancy is the most important quality in sarcoma which it shares with carcinoma. This classification has been adopted for some time by French and English authors, notably Delbet, and is, I think, a help to the average student.

The article on the blood and blood-making organs is again remarkable for its completeness and the amount of detailed information condensed in the forty-eight pages of text.

The classification and description of the various forms of leukemia are especially clear and satisfying. The articles on the osseous system, the respiratory system, and the urinary organs keep up to the same high standard.

The discussion of the peculiar tumors arising in the kidney is full, and the hypernephromata in especial are well described.

In diseases of the female genital tract it seems to me that the classification of ovarian tumors is not the most fortunate, but the article in general is detailed and covers the subject well.

The article on the digestive system is peculiar in giving first the physiologico-pathologic processes, and later the diseases in which they occur, so that in reading the description of a disease one must also turn to this introductory article to completely gain the facts.

The classification of liver cirrhoses seems cumbersome and unnecessarily subdivided. The author errs in ascribing hydatids to the Mennonites in Canada, as the disease occurs mainly in Icelanders and Finns.

On the whole the book is a welcome addition to the list of text-books of pathology, and is, in addition, a work which every practitioner should read, and so bring his knowledge of pathology up to the present standpoint.

J. Clark Stewart.

MISCELLANY

FAREWELL DINNER TO SURGEON-GENERAL STERNBERG

Reported by Dr. C. H. Hunter

MINNEAPOLIS

Friday evening, at the close of the meeting of the American Medical Association at Saratoga, was utilized by some of the enthusiastic admirers of Gen. Sternberg to assemble in New York City a representative gathering of the profession in his honor at Delmonico's. A hundred, more or less, answered the call. The elegant appointments of the spacious and beautiful dining-hall, the sweet strains of music, the lively hum of friendly groups gathered about the separate round tables as "the discussions" progressed, the venerable and brilliant guests, distinguished in many fields and communities —all served to fix indelibly in the minds of the participants the dominant feeling that was the occasion of the banquet—the utmost good will to the retiring head of the navy, Gen. Sternberg. New York's strong names in both medicine and surgery were represented. The city of brotherly love was a close second, and Baltimore and Washington hardly third, while the scattering few from Atlanta, far away Los Angeles, our own Twin Cities, and Portland, Me., swelled the widely gathered total. The army and navy representatives were plentifully sprinkled in, though, I believe, the navy was not heard from. Two of President McKinley's attending physicians were present, Dr. Rixley and Dr. Stockton, of Buffalo.

That the readers of the Lancet may know what New Yorkers like to eat and drink and discuss, I venture to give the menu in extenso. A 6x8 gilt-edged and folded cardboard bore, on the outer side, the legend,

Complimentary Dinner

—to—

Surgeon-General Sternberg, U. S. A.,

Upon the Occasion of
His Retirement from the Army,

1861—1902.

On the inner side, very appropriately, it told another story, as follows:

MENU.

Tomatoes en Surprise.

Potages.

Consomme, Daumont.

Tortue verte au claire.

Hors dœuvre.

Timbales, Palermintairre

Poisson.

Filets de bass a la Marguery.

Concombres.

Releve.

Selle d'agneau de printemps, sauce aromatique.

Choux-fleurs au gratin.

Entrees.

Ailes de volaille a la Toulouse.

Petits pois aux carottes.

Asperges nouvelles, sauce Hollandaise.

Sorbet: Romaine.

Rots.

Pigeonneaux au cresson.

Salade Nonpareil.

Entremets de douceur.

Glaces de fantaisies.

Petits fours.

Fromage.

Cafe.

Vins.

Graves. Sherry Premier.
Pol Roger Brut '93. Chateau Couffran
White Rock. Liquers.

Vendredi le 13 Juin, 1902.
Delmonico's.

The delectable things having been discussed, Toastmaster Janeway introduced the guest of the evening, General Sternberg. Though his 64 years have touched him lightly, he said that, in view of the fact that he is a decrepit old man "by act of congress," he should read his remarks. There followed a pleasant account of his early days in his native town of Central New York, of the getting of his hard-earned diploma, in '58, at the 23rd St. School, of his failure to commend himself to the conservative sick of a certain Long Island village, the volunteering in the Civil war, experiences of the days spent on a wild and dangerous frontier, and finally the rapid promotion, owing to the early retirement of two gentlemen present, that gave opportunity to the strong desire, always present with him, for further means and methods. Dr. Andrew H. Smith, one of the gentlemen alluded to, then responded with the incident of his first meeting with General Sternberg on the Kansas frontier when on his way to the Utes. Fighting savages was then no more child's play than it is to-day, he said, as though he approved of the "water cure" for suitable cases.

Major Lippincott spoke feelingly of the loyalty to their chief, shown by army medical officers. It was he who headed the medical department of the first expedition to the Philippines.

Dr. Osler compared the war to a burly giant pummelling a decrepit old vagabond attacked with G. P., but the subsequent struggle with yellow fever was worthy the best American steel. Then came a ringing apostrophy to the triumph of the scientific method in medicine. This was the best thing of the evening. The modest work of Reed and Caroll reflected the greatest credit upon the army and navy. No page of medical history records a greater triumph than the stamping out of the disease immediately following the discovery of the etiology. Then Gorgas gave a detailed account of how, under the direction of Dr. Sternberg, they had half stumbled upon and half reasoned themselves into the truth.

Dr. Wyeth, ex-president of the A. M. A., was called upon to introduce the new president, Dr. Billings, of Chicago, who made a wise and earnest plea for harmony and a telling invitation to Dr. Jacobi, who was present, to come into the association.

Dr. Welch, of Johns Hopkins, was the last speaker, and he gave a happy and effective account of Dr. Sternberg's contributions to bacteriology, American medicine and army medicine in particular.

With glasses empty and hearts full, we all went home contented.

THE MAN BEHIND THE KNIFE*

By G. Frank Lydston, M. D.
Chicago

I've heard a pile uv jawin',
An' guess I've read enuff,
Bout bugs an' an-to-septics,
An' all that kind o' stuff;
An' I've jest about concluded,
From all the talk and strife,
That the cure is mostly settled—
By the Man Behind the Knife.

Take a hand that's ever ready,
Tho' the skin is somewhat rough,
With a nerve that's good an' steady,
An' a conscience not too tough,
Then a feller needn't worry
'Bout losin' limb or life;
He can trust 'em both completely—
With the Man Behind the Knife.

He may be a great purfessor,
Who does nothin' but purfess,
Er a good ole fashioned doctor,
What brags an' poses less;
The game is safe fer playin',
Tho' the table stakes is life,
If yer justified in trustin'—
The Man Behind the Knife.

When you've got appendicitis,
With McBurney's tender spot,
Er troubled with yer liver,
With its langwidge polly-glot,
Thar's little time fer foolin'
Er fer argyment er strife;
Yer only hope of safety—
Is the Man Behind the Knife.

As I said in the beginnin'
Uv this homely little rhyme,
Discussions deep an' learned,
Is jest a waste uv time;
Thar's no sense in theorizin',
When the stakes is human life;
Fer the patient's fate is settled—
By the Man Behind the Knife.

S'pose you've got a whackin' tumor,
In yer belly er yer brain,
An' the microscope's a guessin',
An' the case is fur frum plain;
S'pose yer child is lyin' sufferin',
Er yer worried 'bout yer wife;
You'll soon forget the scallops—
Fer the Man Behind the Knife.

As it wuz in Santiago,
When we asked how it wuz done,
Came a mighty shout in answer,
"'Twuz the Man Behind the Gun!"
So in our operatin' an' savin' human life;
Don't cheer the fuss an' feathers—
But the Man Behind the Knife.

So I offer this suggestion,
Ter the wranglers, high an' low,
Who do so little cuttin',
But take it out in blow:
Jest quit yer fool discussin',
On the ways uv savin' life;
T' h—l with ink an' microbes,—
It's the Man Behind the Knife.

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*Read at the Banquet of the Surgical Section of the A. M. A., at Saratoga, June 12, 1902.

THE MAN BEHIND THE KNIFE*

(New Version)

By George F. Butler, M. D.
Chicago

I've heard a pile uv jawin',
By physicians young an' old,
Co's they do the diagnosin',
While the surgeons get the gold;
"I will not divide the fee
For the competition's rife;
There's hardly enough fer me!"
Says the Man Behind the Knife.

Yes, the surgeon's hand is ready,
An' he's lookin' fer the stuff,
With a nerve that's strong an' steady,
An' a conscience mighty tough;
An' a feller need ter worry
'Bout losin' limb er life,
As well as all his money,—
Ter the Man Behind the Knife.

He may be a great perfessor,
Standin' well up in the row,
Yet he differs frum the doctor,
Fer he's workin' fer the dough;
He thinks the game wuth playin',
An' he plays it fer yer life;
So if the money is wuth savin,—
Shake the Man Behind the Knife.

When you've got inflammation
In yer lung er in yer neck,
Don't hunt all o'er creation,
With a thousand-dollar check;
Jest ter give a bloomin' surgeon,
Who will trifle with yer life;
But call yer fam'ly doctor!—
Shun the Man Behind the Knife.

Of all the medical men,
The surgeon has the gall;
But the doctor is the squarest,
An' the safest of 'em all.
So you'd better think a while,
When yer guts are in a strife:
Take a dose uv casterile,—
Not the Man Behind the Knife.

S'pose you've got a new disorder,
An' yer feelin' mighty blue;
Don't send fust thing fer a surgeon,
But the doctor, good an' true.
S'pose yer child is lyin suff'rin,'
Er yer worried 'bout yer wife;
Ef yer want ter save her, then
Shun the Man Behind the Knife.

As it wuz in Santiago,
When we asked how it wuz done,
Came a mighty shout in answer,
"'Twuz the Man Behind the Gun!"
Yes, he wuz takin' human life,
Quite similar ter the surgeon,—
That Man Behind the Knife.

So I offer this suggestion,
Ter the sick folks, high an' low:
When anyone talks o' cuttin',
Jest yer go a little slow.
Yer'd better swell up with dropsy,
Fer the rest o' yer natch'l life,
Than ter furnish an autopsy—
Fer the Man Behind the Knife.

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*Read at the Banquet of the Medical Section of the A. M. A., at Saratoga, June 12, 1902.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. J. F. Schefcick, of Mapleton, Minn., has removed to Glencoe.

Dr. T. F. McKey, of Canby, Minn., has moved to Albert Lea.

Dr. E. E. Hall, of Baltimore, Md., has located at Little Falls, Minn.

Dr. Wm. Jacoby, of Wells, Minn., has decided to remove to Mankato.

Dr. Price, of Berresford, S. D., is doing special work at the Chicago Polyclinic.

Dr. A. E. Johnson, a recent graduate of Rush, has located at Zumbrota, Minn.

Dr. D. W. Cowan, of Sandstone, Minn., will be a candidate for the State Senate.

Dr. P. C. Bjornby, of Red Wing, Minn., has decided to move to Bemidji, Minn.

Dr. S. E. Finley, of Wilmington, Delaware, has located in Zumbrota Falls, Minn.

Dr. Hugo Neukamp, a graduate of Berlin and Bohn, has located in Fessenden, N. D.

Dr. M. A. Trow, of Jackson, Minn., has decided to locate at Currie, in the same state.

Dr. Ejnar Lohrbauer, a recent graduate of the State University, has located in Northwood, N. D.

Dr. John A. Garrett, of Sioux Falls, S. D., died last month of diphtheria, contracted from a patient.

Dr. G. L. Gosslee, a recent graduate of Hamline, has located at Pequot, Crow Wing county, Minn.

Dr. O. R. Nevill, of Lakefield, Minn., was married last month to Miss Lela Taglan, of the same place.

Dr. J. F. Blair has succeeded Dr. H. W. Foster in the management of the Bozeman (Mont.) Sanitarium.

Dr. Walter E. Richardson, of Slayton, Minn., was married last month to Miss Whitney, of the same place.

Dr. A. E. Wilcox, of Philadelphia, has located in Minneapolis, and has an office at 220 Syndicate Arcade.

Dr. M. O. Hanson, of Minneapolis, has succeeded to the practice of the late Dr. Reimstad, of Madelia, Minn.

Dr. Harold Lamb has located in Sauk Center, Minn., and entered into partnership with Dr. J. M. McMasters.

Dr. O. S. Hutchins, of Galesville, Wis., has located in Canby, Minn., and succeeds to the practice of Dr. McKey.

Dr. H. J. O'Bryan, a graduate of Barnes' Medical College, of St. Louis, has located at South Shore, S. D.

Dr. Henry T. McGuigan has moved from Milleville to Mazeppa, Minn., and formed a partnership with Dr. Deters.

Dr. H. F. Alexander, of Barnesville, Minn., has gone to New York for two months' study and work in the hospitals.

Dr. O. C. Tarbox, of Princeton, Minn., has decided to locate in New York. He will be succeeded at Princeton by Dr. Guy Caley.

The citizens of Glenwood, Minn., are very anxious to have a hospital. They say the need of one is great, and the location admirable in every respect.

At the June meeting of the Minnesota State Board of Medical Examiners, licenses were granted to 94 candidates out of 115 who took the examination.

Dr. B. S. Adams, who recently located at Hibbing, Minn., is building a hospital. Dr. Adams is physician for several mines, and needs hospital facilities.

Dr. Florence C. Baier, who has been upon the staff of the N. D. Hospital for Insane, at Jamestown, N. D., has located in Minneapolis, with offices in the Masonic Temple.

Dr. S. F. Hance, who has practiced medicine in Minneapolis for thirty years, has retired from practice, and will reside in Fairport, N. Y. Dr. Hance has practiced medicine forty-seven years.

Dr. H. W. Jones, who for the past year has been house physician at St. Luke's Hospital of St. Paul, will take charge during the summer of the practice of Dr. W. M. Edgerton, of Faulkton, S. D.

Dr. H. H. Frudenfeld, of Sioux Falls, S. D., has decided to locate in Madison, S. D., and will be associated with Dr. A. E. Clough in hospital work. He is now in Chicago taking a special course in eye, ear, nose and throat work.

The old Stryker seminary building at St. Anthony Park, in St. Paul, has been purchased, and will be used as a home for defective children. Miss Hill, for many years chief nurse at St. Luke's Hospital, St. Paul, will be in charge.

The natural healers of Iowa have organized a state society, adopted a constitution and by-laws, and elected the usual officers, including an examining board. It is said that there are 200 of these healers in Iowa. As colored healers are barred from the organization, it is fair to presume that "divine healers" will not join the society.

The Devils Lake District Medical Society has been organized by the physicians in several counties near Devils Lake, N. D. Dr. Ruger, of Devils Lake, is temporary president, and Dr. Harris, of Cando, is temporary secretary of the society. A permanent organization will be effected at a meeting to be held the 9th inst, at Chautauqua.

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THE VALUE OF SIMPLE METHODS IN THE EXAMINATION OF THE STOMACH*

By Soren P. Rees, B. S., M. D.

Assistant in Physical Diagnosis, University of Minnesota

MINNEAPOLIS

Based upon a correct diagnosis, the treatment of diseases of the stomach gives better results than that of most other chronic ailments; and without an accurate diagnosis treatment is entirely unsatisfactory. Previous to the introduction of tests for the examination of stomach-contents, treatment was largely empirical. At present the effort to develop and perfect these laboratory aids has led, in many instances, to chemical and physiological tests so complex as to be far beyond the ordinary practitioner and only within reach of the specialist who has at his command much time, a well equipped laboratory, and trained assistants. This present tendency is well illustrated by the introduction lately of a very elaborate method for estimating the amount of HCl by means of electricity.

Those who are without the facilities of the specialist and who nevertheless honestly attempt to make a diagnosis on which to base treatment must rely in many cases upon simpler methods, which, while they may not be as accurate as some of the more elaborate, will nevertheless furnish enough evidence to place treatment on a scientific footing. It is to briefly call attention to some of these simpler methods that this paper is written.

The simple method has in itself many advantages. It is within reach of all, saves much times, diminishes chance of error in its development, permits of tests being made in many instances when the longer methods could not be used, and often allows of repeated tests in the same case. This last point is important. Digestion, whether normal or faulty, is such a complex process, and is influenced by so many factors beyond the immediate sphere of the stomach itself, that one finding is often misleading, and repeated tests must be made in order that an accurate average result may be obtained. This is especially true in that large and rapidly increasing group of gastric disturbances commonly designated as nervous dyspepsia. One examination may show entire absence of HCl; and the next day a faint trace, or even a large percentage, may be found.

That chemical and microscopical tests, though only approximately accurate, are of much value will not be disputed by anyone who has made intelligent use of them. The fact that a short time ago a leading surgeon in this state, while discussing the surgical treatment of the stomach, calmly dismissed all chemical tests by saying they were absolutely of no value, simply emphasizes how unsatisfactory the long and complex methods are to the rank and file of the profession, who have neither time nor facilities to make proper use of them. In the examination of no other organ is a definite plan of procedure so important to a correct finding. In every severe or obscure stomach trouble the following points must be clearly ascertained:

(1) A concise and intelligent history of the present complaint and of the patient's life, habits, and family history must be procured, and accurately set down in the case-record for exact reference. These facts are often elicited with

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

difficulty. The patient can give little testimony that is clear, and is easily led, if prompted, into making misleading statements. The keenest observation is here necessary to sift the chaff from the wheat. The smallest oversight may be a cause of failure. Dr. Herschell tells of a case he had treated for indigestion for some time without results, and which completely baffled him until one day while making a visit he noticed on a table over in a corner of the room a small dish of bon-bons. Upon further questioning, the patient admitted taking afternoons a small piece of candy. As soon as this practice was stopped, the patient made a satisfactory recovery. It is our custom to procure the history the day previous to making the physical examination, in order that ample time may be given for the consideration of the points to be specially noticed at the time of the examination. No better guide for a clear and definite idea of how to obtain the history can be given than Chapter III on "The Interrogation of the Patient" in Dr. Herschell's book, "Indigestion." This chapter has been of more practical help to the writer than any similar article he can recall. It gives a full discussion of the significance of all the questions to be asked and points to be noted.

(2) The size, shape and position of the stomach, empty and moderately distended, must be ascertained. To determine these one must know the normal topography. Too often "medical anatomy" is overlooked, although it is fully as essential to an accurate practice of medicine as a knowledge of surgical anatomy is to the surgeon. The normal boundaries of the stomach, however, may be much changed without causing pathologic symptoms. The greater curvature, though usually an inch or more above the umbilicus, may be found, in health, to extend considerably below this point. The size and position of the stomach, considered as a cause of disease, depend entirely upon its motor power. If the motor power is unimpaired, and the pylorus patent, a dilated stomach will give no trouble.

(3) The motor power of the stomach must be determined. Atony of the stomach-wall is one of the most frequent causes of impaired function. The motor power is best determined by giving the patient an ordinary meal, and then ascertaining by means of the stomach tube whether the stomach has emptied itself in the proper time. The nature of the meal must be considered in determining when the stomach should be empty. Ewald's test breakfast, 3 ounces of bread and 10 ounces of tea, should only remain two hours, Leube's test dinner, a plate of soup (13 ounces), scraped beef, 2 ounces, and 1¾ ounces of wheaten bread, should not remain longer than six or seven hours. A simple and admirable method of determining the tonicity of the stomach-wall depends upon the fact that if a healthy person drinks one litre of water, the dullness corresponding to the greater curvature is always above the umbilicus. If, however, the viscus is dilated, it will reach below this point. It is best performed in the following manner: First of all a quarter of a litre of water is given the patient to drink, and then the greater curvature is made out on percussion. This is followed up with successive portions of the same quantity, percussing each time. When there is considerable atony the stomach will quickly sink down after one or two glasses of water have been taken.

(4) The secretory power of the stomach by means of a test meal must be determined. The absence or presence of HCl, and its exact percentage, in the stomach-contents is the most important chemical test sought. It at once explains whether pain is due to fermentation for lack of acid or to irritation caused by too much acid. Its bearing upon the differential diagnosis of gastritis, ulcer, or beginning carcinoma is too well known to need mention. The acid occurs in two forms, free and combined. If a proteid meal has been taken the HCl secreted is rapidly taken up and combined with it, and until this affinity has been satisfied no free HCl is found in the stomach-contents. If the meal is pure or nearly pure carbohydrates, free HCl is found in a few minutes, although the total acidity is somewhat lower than in the first instance. The length of the period in which no free HCl is present may therefore vary from a few minutes up to forty-five or sixty minutes, according to the amount of proteids taken, and may be called the first stage of digestion. In the second stage the total acidity continues to rise, but free HCl is present. The length of this period depends upon the amount of proteid food present. It is generally from two to three hours. In the third stage food is being propelled from the stomach, the total acidity falls, but a large proportion of

free HCl is present. In testing for HCl, three things must therefore be considered:

(a) The nature of the meal given.

(b) The time it has remained in the stomach.

(c) Whether the test used will detect free HCl, or combined HCl, or both. By giving a test breakfast of baked rice-cake and water we have only free HCl to deal with, and if removed at the height of digestion, about 60 minutes, the amount of free HCl present will give us in every case a true relative amount of acid secreted.

Many very delicate and beautiful tests have been devised for determining the proportion of HCl present, most of which are long and involved. In testing for the mere presence of HCl in the stomach-contents with the dimethyl solution, Dr. J. W. Bell had long noted that the intensity of the red color resulting varied greatly and probably in a definite ratio to the proportion of HCl present. At his suggestion, the writer has worked out a color scale based upon a definite solution of HCl and a definite amount of dimethyl added. The results of this simple test have been repeatedly compared with those of the longer quantitative methods, and have been found very accurate in spite of certain theoretical objections that might be raised. A description of the test has already been given as follows ("The Medical Aspect of Gastric Cancer," J. W. Bell, M. D., N. W. Lancet, Oct. 15, 1901):

"The test depends upon the fact that the intensity of the color reaction of Topfer's solution of dimethyl-amido-azo-benzol (a one-half of one per cent alcoholic solution) with hydrochloric acid depends upon and varies with the percentage of free hydrochloric acid found in the fluid tested. It is convenient to establish a color scale by adding the reagent to a number of test-tubes, each containing the same amount of solution, but each solution varying in its percentage of hydrochloric acid. For this purpose we have used a small rack holding seven small test tubes. Test-tube No. 'O' contains 4 c. c. of distilled water to which one drop of the reagent has been added. The resulting color is a light canary, and represents entire absence of hydrochloric acid. The other six test tubes hold each 4 c. c. of a solution of hydrochloric acid and distilled water, but of a gradually increasing strength.

"Thus test-tube No. 1 represents .005% HCl, or 1 in 20,000; the smallest trace of HCl discernible by use of reagent.

Test-tube No. 2 represents .05% HCl.

Test-tube No. 3 represents .1% HCl.

Test-tube No. 4 represents .2% HCl (normal.)

Test-tube No. 5 represents .4% HCl.

Test-tube No. 6 represents .6% HCl.

"To these test-tubes enough reagent has been added to bring out the full strength of the color in each tube. This has been found to be

"1 drop for tube 1; 2 drops for tube 2; 4 drops for tube 3; 8 drops for tube 4; 16 drops for tube 5; 24 drops for tube 6.

"In this way we have a permanent and convenient color-scale before us with which to compare the filtered stomach contents to be tested for free HCl. In testing a given specimen the same amount (4 c. c.) of filtered stomach contents is taken, and one drop of the reagent is added. If HCl is found to be present, the resulting color is matched as nearly as possible with one in the scale, and another drop of the reagent is added to see if a change in color results. If so this new shade is to be compared with the colors, and its place in the scale determined as closely as possible, when a third drop of reagent may be added. This process is continued until a color is produced which does not change upon adding more reagent. This permanent color is located in the color-scale, and its mate then indicates the percentage of HCl present.

"The color-scale is best viewed by reflected light against a sheet of white paper, the light striking obliquely.

"As a check upon this method, another test which we have found very serviceable though requiring quicker judgment, and perhaps more experience, is to allow one drop of the above solution of HCl and water to unite with a drop of the reagent upon a white porcelain plate, and to quickly bring together near this series of colors a drop of the reagent and a drop of the filtered stomach contents to be examined, and to harmonize the intensity of the color of this last drop with that of one of the others, the strength in HCl of which is known.

"As the color in the test-tubes will fade somewhat with time we have found it convenient to make up solutions of the above strength of HCl, and to keep them in separate glass-stoppered bottles, duly labeled. From these stock solutions one can prepare in a few minutes a fresh color-scale, or use them in the drop method to verify an estimate already made by the scale."

(5) The presence of organic acids should be noted if the percentage of HCl is deficient. These are lactic, butyric, and acetic. They may often be discovered by their odor. If HCl be absent, and carcinoma of the stomach is suspected, it is well to give a test-meal free from lactic acid, such as baked oatmeal cakes. If the stomach has previously been washed out, we may feel assured that any lactic acid found is formed in the stomach itself. Uffelmann's test is simple and accurate.

(6) A microscopic examination of the stomach contents or residue from the filtrate should be carefully made for R. B. C., certain bacilli, and fungi, bits of detached neoplasms, and the nature of food particles undigested. Not until this method has been carefully followed and success in it attained can one form a true estimate of how positive and speedy evidence may be gotten from this simple procedure. As in the microscopical examination of feces, it is well to study every case brought to notice in this way in order to become familiar with the large number of appearances met with. The microscope during the last year has given us a very early and positive diagnosis in several obscure and important cases that could at that time be reached by no other method.

A convenient method of procedure in the ordinary stomach case if the physician has only limited facilities would then be as follows:

Obtain the history on the day previous, and ask the patient to come to the office the next morning without taking any food whatever. This will allow an examination of the empty stomach. If the stomach is not empty or any doubt on this point exists, after a careful examination by the usual methods of inspection, palpation, percussion and auscultation, the stomach-tube is introduced. If any contents are found they are saved for examination. If these are food from the previous night they at once tell of imperfect digestion and delayed emptying of the stomach, and the cause of such delayed emptying must be sought for. If not food, but gastric secretion, its acidity and composition must be determined. In either case the contents are subjected to the full examination already ascribed to the test-meal. Mucus in excess is easily recognized. Normally it should not exceed one-half teaspoonful.

If the stomach be empty, a test breakfast of two ounces of rice cake and a glass of water, is next given. This is removed in sixty minutes, and while the tube is still in place the stomach is distended with water. This test with the patient in the upright position gives an absolute test for the greater curvature, and for this purpose is much more reliable than distending the stomach with gas. With the tube still in place the water is siphoned out and the stomach is distended by means of the tartaric acid and sodium bicarbonate powders. The stomach thus distended can easily be mapped out in all its dimensions by means of percussion. We give the sixty grains of tartaric acid first in order to avoid retching due to the premature formation of gas in an already acid stomach, if the eighty grains of sodium bicarbonate were first given.

In these cases when we may not wish to use the tube, but where nevertheless we desire to distend the stomach by means of gas, we have found it perfectly safe, notwithstanding many writers to the contrary, to give the powders by mouth dissolved in a little water. By giving the soda last and in two or three divided doses, the amount of gas generated can be kept under control.

There should be no difficulty in differentiating with or without the stethoscope between the stomach and colon. If the colon be full of gas the demarcation will best be made out while the stomach is distended with water; if the colon be filled with feces, the stomach distended with gas will give the most striking picture. While the stomach is thus distended tumors or indurations of its walls or pylorus are sought for. In differentiating between neoplasms nearby, but not in the stomach, their movement with respiration is carefully noted. A stomach fully distended with gas will often throw an enlarged or diseased gall-bladder forward so that it can be clearly palpated and separated from a thickened pylorus.

In conclusion: It is desirable to ascertain as much as possible from one method of examination before proceeding to the next, and to make all possible use of the simpler methods before attempting the more elaborate.

INSPECTION AS A FACTOR IN THE PHYSICAL EXAMINATION OF DISEASES OF THE CHEST*

By L. A. Nippert, M. D.

MINNEAPOLIS

Mr. President, Ladies and Gentlemen of the Society:

Distinction not solicited, and bestowed by members of any profession upon one of their number, is an honor indeed. While not entailing great responsibility, the office of Chairman of the Medical Section of this Society has its share of duties, the performance of which is necessary to insure success to our meetings.

I appreciate and thank you for this honor, and I would ask you, by ready response to the discussion of the papers to be presented, to make the work of this Section of interest and mutual benefit.

Since I began the preparation of this paper I have been gratified to receive many applications of members desirous to read essays of importance before this Section, necessitating a strict keeping within the time limit prescribed by the by-laws.

The subject of "Physical Diagnosis," even in its restricted application to examination of the chest, is so extensive that but a meagre outline would consume much more than the allotted time. I shall, therefore, confine my paper to the discussion of inspection only, and change its title to "Inspection as a Factor in the Physical Examination of Diseases of the Chest."

The instructive and scientific address of my predecessor, as Chairman of the Medical Section of this Society, Dr. Geo. D. Head, ends with Gerhard's motto: "Ohne Diagnose keine vernünftige Therapie" (Without Diagnosis no rational Therapeutics).

In the field of diagnosis in general, the physical examination of the chest requires probably more care, time, and experience than that of any other portion of the body. Obscure pathological conditions of the pelvis and abdomen are elucidated by an exploratory laparotomy. Opening of the thorax for diagnosis alone has as yet not been advocated by the surgeon. Radioscopy, which may in the future simplify the examination of the thoracic organs to inspection alone, is in its infancy. At the present date the internist is still compelled to rely on external signs for diagnosis of internal disease of the chest. These signs he perceives by aid of the eye, the touch, and the ear, hence the divisions in inspection—Palpitation and Auscultation,—percussion being a combination of the latter two. For satisfactory inspection the first condition is absolute bareness of the chest.

"Little Billy" would never have immortalized Trilby's foot had he only seen and drawn it when covered with a stocking. What is a necessity to art is in this instance an uncompromising requisite for scientific investigation. To have the upper part of a young girl's chest covered by an undergarment while inspecting the lower portion of the thorax or vice versa, is neither modest nor scientific. As well omit inspection altogether.

The patient stripped to the hip sitting or, if practicable, standing, should face the light, daylight being preferable, with no sidelights to throw counter shadows.

In succession we observe:

(1) The general outlines of the thorax, including size, development, malformations, abnormal distensions, and depressions, or projections.

(2) The state of nutrition, muscular development, and the skin.

(3) The respiratory movements,—their rhythm, rapidity and capacity.

(4) Pulsation of heart and vessels.

I shall not take time to enumerate the varieties of development and malformations, but would draw your attention to two of especial importance: the long, flat chest with short antero-posterior diameter and little expansive capacity as suggestive of a disposition to pulmonary vulnerability; and the rachitic chest with its projecting sternum, its beady costal articulations and flaring lower ribs. Seeing this condition in an infant suffering from whooping-cough will warn you to give a guarded prognosis.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

1.—The throax of an adult resembling in outlines that of a child is one of the evidences of emphysema. Remembering the normal prominence of the precordial region in a large number of individuals, especially in children, unilateral bulgings, with or without obliteration of the intercostal spaces, point to effusions or tumors within the cavity. Localized depressions, frequently intensified in appearance by compensatory emphysema of other portions of the thorax, are evidence of shrinkage of the lungs, the effect of long-continued compression or fibrous changes and contraction of their structure, or of loss of substance from gangrene, abscess, or tubercular destruction. Abnormal projections not due to malformation, may result from tumors of the different layers of the chest-wall or from growths having their origin within. These are usually malignant in character or are aneurisms.

2.—The state of the general nutrition of the thorax is apparent on inspection. The color, elasticity, smoothness and dryness of the skin are noted. The dry, glistening, pearly skin of the patient suffering from tuberculosis, is in strong contrast with the soggy, mottled appearance of the integument found in failing heart compensation.

Eruptions and scars are readily noticed when looked for. The former have usually no direct bearing on the condition of the organs of the chest.

The Norwegian or German farmer who has given a previous history of perfect health is mystified and impressed when you tell him that years ago he has had some trouble in the side which is the seat of his present complaint. He then remembers that he had pleurisy in his childhood. You have simply seen the evidence of treatment in the linear scars left by the scarificator or the round marks of acupuncture and croton oil. The artisan wonder how you know that he is left-handed before he has told you so; the hod-carrier does not understand how you can read his occupation from the appearance of his chest. Inspection has shown you in the one the greater development of the left pectoral mucsle, and in the other the acquired elevation of the carrying shoulder.

Excessive development of the intercostals, and digitations of the serratus and of other accessory respiratory muscles, are evidences of long-continued dyspnea most pronounced in asthma and emphysema.

3.—Unless the patient is asleep, the rhythm and rapidity of respiration are usually at first disturbed by nervousness, induced by the examination.

Labored and prolonged inspiration is readily detected in cases of obstruction of the larynx and trachea or of spasm of the bronchial tubes. The latter condition and emphysema are the only factors in prolonged active expiration.

The drawing-in of the intercostal spaces and epigastric angle shows serious interference with the entrance of air into the lungs, and is, in acute laryngeal or tracheal disease or injury, an indication for immediate relief by surgical means.

Interrupted inspiration is noticed in nervous individuals or in children after a crying spell. It is also observed in interference to the entrance of the air-current from beginning tubercular infiltration. An important and early sign of this disease is a lagging of the affected side, the expansion of which appears to be slower and less full than the corresponding region. It is well to remember that, normally, the right side does not expand quite as freely as the left.

Inspection is of minor value in determining the capacity of the chest, which is much more accurately ascertained by other measures, although an experienced eye can fairly judge the amount of expansion on deep inspiration and expiration.

4.—In persons not too fat, the apex beat is usually quite perceptible, and will be noticed to change with change of posture,—upwards and inwards in recumbency, and outwards if the patient turns on his left side. Failure to move with position either indicates adhesions of fixations by effusions or growths.

Diffuseness of the heart's impulse occurs in hypertrophy due to valvular disease or renal affection and is most marked in Graves' disease, and less so in simple hypertrophy. An abnormal bulging of the precordial region accompanies cardiac enlargement of long standing or effusions into the pericardium. In thin persons the filling of the left auricle may be seen as a systolic impulse in the second left interspace near the sternum.

Dilatation of the heart or its exposure by refraction of the lungsin chlorosis or by contraction of these organs in fibroid phthisis, causes its wave-like pulsations to be visible.

The impulse of a dilated aorta from atheroma or aortic regurgitation can be seen in the suprasternal notch. Prominence and tortuosity of the muscular and cutaneous arterioles of the thorax are but a part of the general enlargement of the arterial system in insufficiency of the aortic valve. The positive (systolic) pulsation of the jugular in tricuspid regurgitation is ascertained solely by inspection, and this method may be the only means to detect slight abnormal pulsations from aneurism. An important early sign of mediastinal tumor is the engorgement of veins over the sternum.

Retraction of the intercostal spaces over the precordium during systole, is given as a feature of adherent pericardium, but is commonly observed in dilatation of the heart as a result of the negative pressure created by the emptying of the enlarged ventricles.

Inspection would not be complete without attention to the posterior part of the thorax to ascertain the condition of the spine.

Finally, the patient is placed in the recumbent position with his feet towards the window, and the thorax scrutinized again. In this position alone the pealing of the diaphragm from the lower ribs (Litten's sign) can be satisfactorily demonstrated. Its absence means incomplete action of the diaphragm through lack of expansion of the lungs or from paralysis, pressure of effusions or growths, or its fixation by adhesions. The undulating shadows of abnormal pulsations, obscure while the individual is standing or sitting, may show clearly in recumbency.

I am aware that this essay is of an elementary character and presents nothing new, yet the frequency with which I have observed so-called physical examinations to be limited to percussion and auscultation, omitting inspection and the equally important factor of palpation, has induced me to endeavor to point out to you the amount of diagnostic information obtainable by this method, and to use the words of Vierordt, "I have taken pains to emphasize the fact that, besides availing ourselves of the constantly increasing finer methods of diagnosis, the simple use of our senses, especially the unaided eye, must not be forgotten."

If I have succeeded in impressing this necessity upon you, the object of this paper has been fulfilled.

SWEDISH MOVEMENTS AND MASSAGE*

By A. Lind, M. D.

MINNEAPOLIS

The heading of this paper brings us into a field of medicine that may appear new, and still it is undoubtedly the oldest. Swedish movements and massage, although developed to its present perfection within the last century, has certainly been practiced thousands of years. Rest and exercise have been made use of by the savage in his dugout as well as by the millionaire in his palace. As long as the physical culture was receiving more attention than the mental development, the medical part of the Swedish movements was not needed; but as the gray matter of the nervous system became the most important factor in the world's progress, the principles of rest and exercise had to be elaborated so as to meet new requirements.

It is a generally known fact that the farmers or those living in rural districts for some generations are healthier and better equipped, both mentally and physically, than those living in the larger cities. The explanation of this fact is evidently to be found in the abundance of fresh air and exercise enjoyed by the country people. These two factors, fresh air and exercise, are inseparably connected with one another and with a sound body, forming together with wholesome food the tripod on which the ideal of human health and happiness rests. Much can be done by the physician towards the maintenance or restoration of health to the patient by instruction as to diet and ventilation. We might go even a step further: we may aid the respiration by strychnine, the digestion by ferments, and the circulation by digitalis. But we must confess that when it comes to the most important, the grand metabolism or the great internal respiration of the body, the alteratives or other medicines we give are only a farce. The heart may be ever so active, it can only make the blood circulate rapidly in its proper channels; the lungs and digestive organs may be ever so good, they can purify or enrich only the vascular tissues coming in contact with them. Proper exercise is essential to internal respiration and general metabolism. In case of disease or otherwise unnatural rest or lack of exercise of the body or part thereof, the tissues thus placed at a disadvantage will have less communication with the general blood-current, and as a result waste materials accumulate, repair material becomes scarce, and deterioration of the part or of the whole body manifests itself by weakness, pain, and other phenomena of malnutrition. The vital organs may be all right for a time, but they will soon participate in the general breakdown. The digestive organs become disordered; the heart, regulated by an upset nervous system, gets weak, and alarms the patient; the lungs are not exercised to their full capacity, and tubercle-bacilli find lodgment in some quiet poorly nourished part; and the patient grows from bad to worse. Mechanotherapy is the only thing by which we can benefit a good many of these neurasthenic, melancholic, and broken-down fellow beings.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

A good spanking will soon bring the natural glow to the pale skin; properly applied passive movements will force the stagnant waste-laden fluids into the circulation; and fresh nourishing lymph or blood will rush in to give the tissues new life and vigor. You may claim that common exercise will accomplish the same thing, and I admit that in some cases it may; but if the patient did not have energy or strength enough to take exercise to keep himself well, how can we expect him when sick to do what he could or would not do when he was well? Passive motions systematically and intelligently given will benefit a large majority of our patients, and is the best and often the only effective treatment for a great number of our chronic cases. I do not advocate mechanotherapy for the cure of pneumonia or typhoid fever; yet even in those diseases I consider it better than aconite and equal to digitalis. Especially in the last-named disease no physician does his duty without using it at some stage with some patients.

The disorders most readily yielding to mechanotherapy are stomach and bowel troubles, nervous affections, rheumatism, surgical joint troubles, etc. It is self-evident that in utilizing mechanotherapy science and skill is requisite, and he who by improper movements breaks an abscess into the peritoneal cavity or forces a septic thrombus into the general circulation, is guilty of taking the patient's life just as much as is the doctor who kills by an overdose of drugs. An ulcerated stomach-wall might easily become perforated, a pelvic or appendiceal abscess may break under injudicious manipulation; but, in general, no part of the body yields such magnificent results to mechanotherapy as the abdominal cavity. This is easily explained when we consider that the function, as well as the anatomical construction, of this region readily allows a substitute of work. The sluggish portal circulation is promptly influenced by proper movements, and a pair of trained hands can control peristalsis with astonishing results.

We have all had sad experiences with a certain class of dyspeptics, who go from doctor to doctor and demand medicine to cure "the liver," or relieve their pain and distress, when proper diet and exercise are absolutely necessary for their comfort.

Mechanotherapy is the only reliable remedy for our national ailment, constipation. The muscular coat of the intestines is stimulated by Swedish movements and massage just as well as the muscles of the rest of the body are. Through the fistulous opening of the stomach of the Canadian hunter, it was established generations ago that secretions of the stomach were increased by irritations, mechanical or chemical. The same facts have been established in regard to the intestines. It is generally observed that by properly applied mechanotherapy the appetite is bettered, distress and pain due to functional disturbances in the abdominal region disappear, circulation is improved, and at the same time the heart is relieved. The common treatment for intestinal colic is some sedative resulting in distress and constipation which lasts for days or weeks, while in a great number of such cases kneading of the intestines and hot enemas will make the patient well in a few hours.

When we come to the nervous system mechanotherapy shares a good deal of the uncertainty which accompanies so much of the work in this most obscure field of medical science. It is self-evident that lesions of the central nervous system can be very little, and only indirectly, influenced through general nutrition. Functional and peripheral nervous troubles present the most fertile field for mechanical treatment; yet the prognosis must always be guarded. In some cases relief is brought about speedily, in other similar ailments the same operator may work for months without much improvement. Those having had opportunity to compare generally concede mechanotherapy to be the best treatment for both neuralgic and muscular pains. That the neurasthenic and hysterical patients are benefited by it as by nothing else, cannot be denied. This is readily explained when we consider that the most of these troubles are brought about by lack of exercise or unproportionate nervous strain.

As every decade seems to increase the number of hysterical bedridden women and worn-out business men, every community may in the future have to provide itself with municipal "spanking institutes" where such unfortunates are given or compelled to take proper exercise. In traumatic cases massage is often of great value, and ought to be used much oftener than is now the case. Even in fractures and dislocations it can be used with advantage even in the second week. In sprains and bruises it works admirably. Metzger's followers brag of the good results obtained in fractures of the patella by treating them with massage only. I have never tried it, and would insure well for malpractice before I did.

Tubercular joints ought to be left alone, but can be influenced through the rest of the body. Acute articular rheumatism is best treated by the salicylates. As a rule all acute inflammatory diseases, whether general or local, should be left alone by the masseur. Infiltrations and subacute inflammations in muscles, tendons, fascia, bursæ and synovial membranes are best treated by mechanotherapy. Whenever and wherever metabolism needs to be increased in tissues within reach, mechanical treatment will accomplish it better than anything else. Even when the whole body is below par, it will often, together with hygienic living and forced feeding, bring the system back to normal when everything else fails.

In mechanotherapy too much stress can not be laid on the fitness and training of the operator. A pair of soft trained hands and an intelligent brain are absolutely essentials to success. The ordinary physician generally makes a failure when he tries to be a masseur, for he has neither time nor patience for such work. The temptation to relieve pain quickly by morphine or to stimulate by strychnine, rather than to spend hours without appreciable result is too great, even if he has acquired skill enough so as not to scare away his patient by his clumsiness at the first attempt. The professional masseur, who does not know anything but rubbing and charging good fees, is just as bad as the medical quack in general, and he is more dangerous to humanity than the highway robber. The majority of the so-called masseurs, both "domestic" and "imported," are imposters without knowledge or training, who do not care to work, but want to make an easy living. Laziness makes a masseur entirely worthless. Mechanotherapy means work and hard work on the part of the operator, and no day laborer puts in harder working hours than a faithful masseur.

Considering all this the question arises, How can we get proper persons to help us out in this important branch of medical science? We are behind other civilized countries in this, and the cause, I think, is mostly with the improperly trained masseur. It is not our nature to stand behind other nations. At present we are up to date or ahead in almost every science and industry. Twenty-five years ago we were inferior as to medical training, and the Europeans are still sneering at us when we go abroad. Now from personal observation I feel sure that our medical schols are up the the average, and we are rapidly getting ahead of our European friends in medical training. As to Swedish movements and massage no effort has yet been made in this country to bring that in line with other branches of science and art. It is true that Minnesota has again taken the lead, and established a didactic course in mechanotherapy at its university. But with the knowledge of mechanotherapy and without practical training and without trained masseurs, the physician will be in the same position as the carpenter or mechanic without his tools. There is nothing that degrades a trade or profession more than poor representatives. Considering that at least nine-tenths of the representatives of Swedish movements and massage are without proper knowledge or training, it is easily seen why it has not obtained its proper standing. It is the duty of the medical profession to provide itself with proper laborers, or tools if you please, for the work on hand. If this is not done, a good deal of our work will be left undone, and the osteopaths and other quacks, hostile to true science, will flourish on account of our neglect.

THE PIONEER DOCTORS OF THE MINNESOTA VALLEY*

By J. W. B. Wellcome, Sr., M. D.

SLEEPY EYE, MINN

THIRD PAPER

Dr. Albin Dornburg

Dr. Dornberg came from Germany. He was born in 1800. He was educated as a homeopathic physician at Heidelberg, and came to Mankato in 1856. Dr. Dornberg was a fine looking gentleman. He was affable and genial, and made many friends in Mankato and vicinity. There was a time when his services were in great demand by those who had faith in his system of practice. He was popular, especially with women and children, as his medicines were very pleasant to take, much more so than the bitter drugs of the regular physicians, and he worked up a good practice. His warm heart and kindness in the sick-room, and his smiling countenance, were fully appreciated by his patrons in Mankato. He was attentive to business and had faith in the virtue of the little homeopathic pills. His practice interfered with the practice of the regular physicians but very little.

Dr. H. H. Herring, of Lake Crystal

In writing this doctor's biography, I wish to say that I have never been personally acquainted with him. But as he has been riding since 1876 over the same field that I occupied for thirteen years as a physician, I have learned something of his practice. He has worked up a very large and lucrative practice by his honest dealing with people, and by his more than ordinary skill. He has the reputation of being a very faithful servant of the people, willing at all times to respond to sick-calls when possible to do so. He has had all the sweets of frontier life in the practice of medicine. He came to Lake Crystal a young man, full of life and vigor, and bound to achieve a reputation which he certainly has. The night was never too dark, the storms too severe, or the roads too muddy to deter him from launching out in his early practice to attend his patients. He is now 59 years of age, and continues his work. Times have changed since he first made his appearance in this valley. Today he lives in a thickly settled country of rich farmers, where he is reaping the benefit of his former arduous work. He has made many friends in Blue Earth County, and he justly deserves them. He graduated from Miami University in 1859, and served as a hospital steward and assistant surgeon during the war of the rebellion. He graduated from Miami Medical College, Cincinnati, Ohio, in 1873, and came to Lake Crystal in 1876. He is a member of this association.

Dr. O. H. McMichael, of Vernon Center

Doctor McMichael came into Blue Earth County in 1871, and commenced the practice of medicine at Vernon Center. By his skill, his willingness to faithfully respond to the calls of the sick, day or night, and his high qualifications as a physician, he built up a very large practice. Like all the pioneer doctors he had to meet conditions that were severe; but he was always at his post. No person suffered for the want of his professional care when he was called. Since 1871 he has spent a large part of his time in his buggy and at the bedside of the sick. He has always been very unassuming and charitable. He is very popular with the people, and his latch-string always hangs out to any physician who honors him with a call. The doctor is finely educated, having graduated at the medical department of Michigan University, in 1871, and has practiced continually ever since. He is a member of this association and of the American Medical Association.

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*Read before the Minnesota Valley Medical Society, May 6, 1902.

Dr. William D. Flinn, of Redwood Falls

The history of Doctor Flinn is so well known by most of the medical men of Minnesota, that any eulogy of him on my part would be useless; but in justice to the man his history should be put on record. No physician who ever came into Redwood County has been as popular as Doctor Flinn, in his own or adjoining counties. He was not only a very successful practitioner of medicine, but he was a man of such big character that his very presence inspired confidence in all those with whom he came in touch. He made no effort to get business: it came to him unsought, and was too much for his physical strength. His arduous labors, long drives, and great exposure to cold in winter told on his constitution, which had been shattered in the late rebellion. Ever since he left the Union army he had severe stomach trouble, yet he responded to his calls day and night, forgetting himself for the sake of the sick and afflicted. He was one of God's noblemen. His humanity was unbounded, and he made no distinction between rich and poor; all were his brothers. I cannot convey to you with my pen the high esteem in which he was held in his community, and the grief felt in his untimely death. His neighbors yet mourn his loss. The doctor located at Redwood Falls in 1870. He had practiced two years previously at Elysian, Minnesota. He graduated from Rush Medical College, in the class of 1868. He held manv honorable positions. He was U. S. pension surgeon at Redwood Falls for a number of years, and was subsequently a member of the pension board located at Sleepy Eye Lake, under President Harrison, for four years. He had the honor of being president of the Minnesota State Medical Society, in 1896-97. He also served on the State Examining Board for some years. These positions he filled with ability. He was also a member of the American Medical Association in which he took great interest, being a very progressive man. Dr. Flinn was born in Ireland, July 24, 1842. He served through the war of the rebellion. He died at Redwood Falls, Nov. 15, 1897.

Dr. Charles Berry, of New Ulm

Dr. Berry was born in Coleville, New York, in 1837. He graduated from the Medical Department of the University of Buffalo, N. Y., in 1870, and came to New Ulm in 1872, and commenced the practice of medicine. The doctor possessed more than common natural ability, and had received a fair medical education which he made use of greatly to his advantage and success. He was a genius of the first order, and a good general practitioner, and he made many friends. He was a good conversationalist, pleasing in address, and of strong personality. He always wanted a "jolly good time," and spent his money freely. He had a good practice, and was a member of the Minnesota State Medical Society and of the Minnesota Valley Medical Association. He passed over the river some years ago, dying from Bright's disease of the kidneys.

Dr. C. L. Francis, of Sterling

Doctor Francis came from Maine where he got his medical education, and located at Sterling in 1856, and at once began to practice medicine. The township, and in fact the whole country, was sparsely settled. As he was a good doctor he was in great demand. He generally traveled on horseback, and he could be seen almost any day taking long rides even to the extreme border of the state. Silently and alone, often plodding his way through snow and mud, he visited the sick and distressed. He was a man of very kind heart and of great sympathy for the sick. To-day he lives in the hearts of the old settlers in the field where he has practiced so many years. Time has dealt kindly with him, and he is reaping the benefits of his successful practice. No man in Sterling is more respected than Dr. Francis.

PLASTER OF PARIS CASTS*

By C. A. Kelsey, M. D.

MINNEAPOLIS

No part of the work of the general practitioner gives so much anxiety as fractures. Every case is an individual case. Splints must be accurately fitted to each fracture, the object being to retain fragments in place, and the result is wholly dependent upon the accomplishment of this.

What dressing shall be used? In my experience of twenty-seven years I have found nothing so satisfactory as the plaster-of-Paris bandage. It is easily adjusted to any part of the body by moulding it carefully to the irregularities of the part. It can be used for long splints of any shape. When properly applied it holds the fragments in place by controlling contractions of muscles, and also affords an unyielding support.

The cast should extend up the limb above the muscles involved in the injury, so as to control contractions. It should be split open before the surgeon leaves the house, so as to avoid any undue pressure on blood-vessels and nerves, by the swelling of the part.

A narrow, thin piece of tin put under the cast to cut down upon, greatly facilitates the opening of the cast. The tin is removed as soon as the cast is opened. A light bandage can be put around, and can be loosened as the limb swells, and tightened as the swelling subsides or the muscles shrink from disuse.

It is not best to put absorbent cotton or other packing under the cast, and it should not be done for fear of a partial displacement of fragments. If the cast is perfectly fitted it will produce but little discomfort.

The writer puts the plaster cast next to the skin. Three children with fractures of the arm are now wearing casts thus applied without complaint. Opening the cast when it is applied not only provides for the enlargement and shrinking of the limb, but enables examinations of the parts by springing the cast sufficiently to remove and replace it.

Good results can be secured in fractures of the elbow-joint where passive motion is desired, by splitting the lower part of the cast, thus permitting passive movements without disturbing the support of the fragments involving the joint. The writer believes from his limited experience that it is a valuable aid in fractures of the clavicle. By placing the patient on his back the fragments can be adjusted, and a prefectly fitting cast put on, and can be held in place by adhesive straps.

In fractures of the nasal bones by packing the nares well and applying a cast over the nose, good results can be obtained. In fractures of the lower maxillary it makes a model dressing. If the last strip of bandage be allowed to extend beyond the cast, dividing each end into two strips, it makes a convenient way to hold the cast in place by tying over the head.

In compound fractures long splints can be so adjusted as to firmly hold fragments in place, and leave the wound open for the purpose of dressings.

In fractures of the femur, within the capsule, when patients are not too fleshy, it can be used to good advantage. It holds the parts so rigidly that pain is relieved, and the patient can be up around the house and yard, while other kinds of splints confine him to the bed.

In a recent case the pain was intense before the cast was applied. When put on the relief was so great that the patient could not believe there was a fracture. The shortening of the limb, however, gave evidence of a complete fracture. This shortening is made greater than necessary by too early removal of the cast.

With a supply of plaster-of-Paris bandages of assorted sizes, one is prepared to care for fractures of any nature upon short notice.

To avoid undue pain or harm to the parts from pressure caused by swelling, always open the cast its entire length, and to the skin, before leaving the patient. This will enable the surgeon to examine the parts at any time.

Adjust the cast perfectly to the parts without padding and maintain the perfect fit by roller bandage, allowing the cast to open as the limb swells, and to close or lap by as the swelling subsides or the muscles waste.

Maintain daily passive movements of joints by suitable slits in the cast.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

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DR. MARY B. DAMON

The Lancet regretfully records the death of Dr. Mary B. Damon, which occurred at Weston, Mass., July 6.

Dr. Damon was born in Concord, Mass., thirty-eight years ago. She graduated from Vassar College in 1886, and four years later received her degree of M. D. from the Woman's Medical College, New York City.

Dr. Damon came from one of the old families of Concord, and was well known in that vicinity, and has practiced in Minneapolis for the past six years with success. She was possessed of a fine analytical mind, and a very agreeable personality.

She was a conscientious student, a careful and skillful diagnostician and was scrupulously conscientious in her dealings with patients.

As a writer she was modest, and hesitated to record her observations and clinics, but when an article from her pen appeared it was complete in detail.

Dr. Damon was particularly interested in neurological work and served as clinical assistant in the Department of Neurology in the University Free Dispensary, her former training in similar work in the East fitting her for this work in a most satisfactory manner.

A very troublesome insomnia, with depression, caused her retirement from active practice for the summer.

As an interested and valuable associate in the work of The Lancet she will be missed, for she rendered many services to the editor and publisher. She read our foreign exchanges, especially the French and German, with much care, and made occasional abstracts of important articles. Two short book reviews written by her just before she left Minneapolis appear in this issue of The Lancet.

MECHANOTHERAPY

Dr. A. Lind, of Minneapolis, who writes on "Swedish Movements and Massage," attended the celebrated Royal Central Institute of Gymnastics in Stockholm, graduating therefrom with the degree of Director of Medical Gymnastics.

This Royal Institute requires the degree of Bachelor of Arts and Sciences for admission. The course of study extends over three years.

Graduates of medical colleges of recognized standing may attain the degree in one year.

The article is a very interesting one, written by an authority on the subject and should awaken an interest in medical gymnastics.

When physicians pay more attention to this line of therapy, encourage its promotion, recognize its value and educate their patients to its advantages, the fakers of the present day will do less business and less harm; and Osteopathy and unskilled and poorly trained operators will seek other means of employment or will perfect themselves before casting themselves before the public with vociferous cries of their attainments.

The Lancet urges upon the profession the further study and encouragement of this valuable aid in the treatment of disease.

REPORT OF THE MINNESOTA STATE BOARD OF HEALTH

The eighteenth annual report of the Minnesota State Board of Health and Vital Statistics for 1899-1900 is a volume of 667 pages with thirty pages of index arranged in an admirable manner.

The report includes the minutes of the regular meetings of the board, and the exhaustive report of the secretary and executive officer, Dr. H. M. Bracken.

The secretary is recognized as the most energetic and vigorous official ever connected with the board. He and his work are so well known by all of the state boards that his reputation is national.

The establishment by the board of a bacteriological laboratory aids in the diagnosis of certain infectious diseases, the clearing up of doubtful diagnoses, and the investigation of obscure diseases. The work of the laboratory has been of inestimable value to the physicians of the state, and should be substantially encouraged among legislators.

Dr. F. F. Wesbrook, the director of the laboratory, Dr. M. H. Reynolds, the state veterinarian, and Hubert Carel, the chemist, have contributed much educational matter in the report.

The infectious diseases of man—diphtheria, scarlet fever, measles, smallpox, tuberculosis, typhoid fever, infantile diarrheal diseases, epidemic cerebrospinal meningitis, cancer, and leprosy—are fully covered and reported by the secretary. The chapters on smallpox and the recent epidemic outline the work of Dr. Bracken. His paper on leprosy and the record and clinical history of 82 cases officially reported from Minnesota, Iowa, Wisconsin, South Dakota and North Dakota, are particularly interesting and suggestive. The comments on school inspection, proposed national park of Minnesota, sewage disposal, water and ice supplies, creamery and factory waste, the disposal of garbage, meat inspection, slaughter houses, state institutions, transportation of the dead, and embalming should be carefully read by every sanitarian.

The reports on water survey, with field analyses in various counties and the laboratory work tabulated, show the laborious work of the chemist.

The director of the veterinary department gives the result of the work of himself and his assistant among the animal diseases. No one can appreciate this as well as the farmer and breeder, for it contains valuable advice and instruction.

The detailed reports from the bacteriological laboratory by Drs. Wesbrook and Wilson are valuable additions to the general literature. The whole volume is a text-book, and demonstrates the valuable service rendered the state by its efficient board of health.

DYSMENORRHEA

An article by F. Linder (Munich), abstracted for the Journal of the A. M. A., details thirty cases of dysmenorrhea treated at Amann's clinic by local applications of cocain to the nasal mucosa. Schiff claims that 72 per cent of all cases of dysmenorrhea can be successfully treated in this manner. Affections of the adnexa, metro-endometritis, parametritis, or dysmenorrhea without demonstrable disease were speedily cured.

In some of the cases when water was substituted for cocain relief was equally satisfactory, and in a few instances the examination of the nose alone was followed by the disappearance of pain.

Evidently the element of suggestion played an important role, and demonstrates forcibly the influence of consciousness in diseases or disturbances of organs of the trunk.

Head, in an article on this subject, concludes: "When reflected pain of visceral origin comes into existence, the sensations by abnormal activity of the viscera crowd into consciousness and usurp the central field of attention. The patients' character appears to be altered. They become moody, at one time unduly exalted, at another depressed without cause. Reason is displaced, and they lose control over the expression of their emotions and of their temper. When the mental states mentioned above appear in consciousness they seem an intrusion from without, an inexplicable obsession that can neither be controlled nor subjected to logical analysis."

This will undoubtedly apply with equal force to pain that accompanies many of the diseases of the pelvis, as well as of the greater organs of the body, provided an injective process is eliminated, although the disturbed metabolism, which is associated with chronic diseases in general, is not always explanatory of pain.

There is no question that there exists in many cases, particularly among neurotics, a pain which can only be defined as a "mental pain," due to a reflected something which invades and upsets the normal stream of consciousness.

Hence these symptoms are brushed aside with the group of "nervous" phenomena that are of seeming importance.

The relief of such symptoms—pain, fear, vasomotor irregularities and the like—may be obtained by measures, simple or suggestive, if the proper regard be paid to analysis of symptom-groups and the diagnosis of disease states.

In this country suggestion is not so effective in a large number of cases as in countries where it is so generally exploited, and where the masses are susceptible to mental impressions. If cocain or drugs of this kind are used recklessly or generally in the treatment of subjective pains of dysmenorrhea, the eventual results will be disasterous, for patients will demand relief, and soon the information will be wide-spread and unfortunate habits will be awakened.

CANCER AND X-RAYS

At a meeting of the clinical society of the New York School of Physical Therapeutics, the treatment of cancers by *x*-rays was the subject under discussion. Dr. Skinner had treated forty-one cases of cancer during the preceding four months; 18 were of internal cancer, either of the uterus or abdominal cavity, 6 were in the breast and 17 were external. Six of the total number were cured.

If the *x*-rays alone is not sufficient, the brush discharge is used in combination with the *x*-rays.

Do we gain anything of use in therapy from such statements and statistics as these? Such reports do incalculable harm for they are copied into the daily press, and are expanded by the hypnotized reporter.

Medical men who are unsuccessful in the daily practice of medicine and who are not possessed of sufficient cerebrating power, hastily install an apparatus with which they are wholly unfamiliar and will never comprehend thoroughly, then throw out an advertising fish-line, claim priority of treatment, diagnose incorrectly, and enthusiastically treat and promise a cure in inoperable, operable, or incurable cancer.

The men who are competent to diagnose cancer and who are equipped mentally and with apparatus that they understand, make no such claims or statements. They are conservative in their suggestions, and do not claim a cure until a long time has elapsed after the discontinuance of treatment.

Undoubtedly, a number of cancers have been benefited by the x-rays and the violet rays, but it is not yet time to make extravagant statistics the basis of a cure.

If these ideas prevail, every man who possesses a static machine or a large coil, or the money to buy one or both, will promulgate elastic statistics on his unsuspecting associates. It will be safer for the present to withhold final judgment as to the therapeutic value of rays of any kind in the arrest of malignant disease. By all means encourage the use of such seemingly mild measures for the mitigation of malignancy, but see that the operator is an expert; and beware of the wily statistician who would beguile you by movable figures that adjust themselves so graciously to your willing ideas, and keep well out of the way of one who has cured an undoubted case of cancer in four months.

Physicians who allow themselves to be gently pushed into printing their opinions on recent and short-lived remedies, or who diagnose and suggest treatment for cases two thousand miles away, are often like the man who sails smilingly away in a comfortable balloon, admired in his ascent by a multitude who lovingly murmur his name until the bubble punctures and the "descent of man" causes the same murmuring, human mass to rapidly, violently, and visciously change their former estimate to one of castigation and contempt.

No one knows how a mob will behave; psychologists theorize, but the little thing that causes a revolution is wholly unexpected, and, like a cyclone out of a clear sky, utterly annihilates all obstacles in its path.

Treat the people with consideration and conservatism, fairly and honestly, and they will usually forgive inherent shortcomings.

Antipyretics in Children.—McGee, in Cleveland Med. Gazette, states that there is frequently no need of reducing fevers in children, but when he does use an antipyretic of this group his preference is for phenacetin. He gives one to three grains to a child two to five years of age. According to Hare, antipyrin is safest, especially in treatment of the paroxysms of pertussis. It may be given in doses of two or three grains daily for each year of the child's age. Phenacetin, however, is more useful as a sedative in the treatment of influenza in children.—Jour. Amer. Med. Asso.

BOOK NOTICES

Atlas and Epitome of Bacteriology.—A text-book of Special Bacteriologic Diagnosis. By Professor Dr. K. B. Lehmann, Director of the Hygienic Institute in Würzburg; and R. O. Neumann, Dr. Phil. and Med., Assistant in the Hygienic Institute in Würzburg. From the Second Enlarged and Revised German Edition. Edited by George H. Weaver, M. D., Assistant Professor of Pathology, Rush Medical College, Chicago. In two volumes; Part I consisting of 632 colored figures on 69 lithographic plates; Part II, consisting of 511 pages of text, illustrated. Cloth, $5.00 net. Philadelphia and London: W. B. Saunders & Co.

This book adds another to the fine series of Hand Atlases which have been issued by Saunders & Company. The lithographic plates which form Part I are finely colored, and are in most cases accurate representations of the cultural and microscopic appearance of the various bacteria.

The portion of the text which deals with general bacteriology gives a concise survey of the properties of bacteria and their relation to disease and immunity.

The section upon special bacteriology is well arranged, giving full descriptions of the more important bacteria.

A new system of nomenclature has been introduced, which seems well calculated to simplify that difficult subject.

The book is written for the use of the practical bacteriologist, and is rapidly becoming one of the leading authorities upon the subject.

Mary B. Damon.

A Practical Manual of Insanity.—For the Student and General Practitioner. By Daniel R. Brower, A. M., M. D., LL. D., Professor of Nervous and Mental Diseases in Rush Medical College, in Affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and Henry M. Bannister, A. M., M. D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Handsome octavo of 426 pages, with a large number of full-page inserts. Cloth, $3.00 net. Philadelphia and London: W. B. Saunders & Company.

The aim of this work is to present to the medical student and practitioner the essential aspects of mental disease as they appeared to these western authors. Particular mention is made of forms of insanity not usually met with in hospitals for the insane.

The authors wisely and ingeniously refrain from giving a definition of insanity on the grounds that no standard for sanity has been outlined. Insanity is a negative proposition although especially a disease or derangement of the cerebral cortex. It is so intimately connected with every other bodily organ and function that the range of its symptoms is practically infinite. The usual chapters of a text-book of this size, 425 pages, are supplemented by chapters on degenerative insanities, borderland and episodic states, the ethics of insanity, and insanities of the neuroses and critical periods.

The book contains a few photographs of hospital patients. It is written in a pleasing simple style, and is printed clearly by Saunders. For its size and contents it is valuable to the beginner and general practitioner.

A Text-book of Pharmacology and Some Allied Sciences. (Therapeutics, Materia, Medica, Pharmacy, Prescription-writing, Toxicology, etc.). By Tollard Sollmann, M. D., Assistant Professor of Pharmacology and Materia Medica in the Medical Department of Western Reserve University, Cleveland, Ohio. Illustrated. Philadelphia and London: W. B. Saunders & Company.

This book is a striking departure from the ordinary work on materia medica and therapeutics in its method of grouping and arrangement of details. The author has attempted to simplify the subject by describing fully the typical drug of a group,—such as digitalis,—and simply listing the names and preparations of the allied drugs—strophanthus, euonymus, apocynin squills, etc., without giving any special description to each. Such an arrangement will doubtless help the student to grasp and retain certain main points, but it makes the book of small value in actual practice, where the variation in the action of similar drugs is in itself a ground for their selection.

The first part of the book deals at some length with pharmaceutic methods and preparations, and compounding of prescriptions, and here is given a chapter on incompatibility of drugs. The subject is not mentioned elsewhere in the book, and this chapter is so arranged as to make swift reference impossible.

The descriptions given of the drugs typical of each group are full and clear; the experiments upon which deductions are based are well given; and the book is amply illustrated with pictures and diagrams.

The latter part of the book has several chapters on practical exercises in chemistry and animal experimentation.

The book is plainly written from the point of view of a teacher, but the practitioner will hardly find it either a useful or practical book for office purposes.

Mary B. Damon.

MISCELLANY

NEW TREATMENT OF CONTINUOUS VOMITING OF PREGNANCY

M. R. Condamiin (Lyon medical) advises absolute rest of the stomach with complete suppression of all liquid and solid nourishment for from eight to ten days. During this time, three or four quarts of artificial serum are injected daily, preferably into the rectum. If intolerance should appear on the part of the rectum, a few drops of laudanum may be added to the serum, or it may be administered subcutaneously. About the tenth or twelfth day, a few swallows of fluids may be allowed, and the ordinary diet may be gradually resumed. The author reports one typical case, and believes that many cases may be carried to term in this way, in which, otherwise, abortion would result or would have to be induced.—N. Y. Medical Journal.

THE PREVENTION OF LACERATION OF THE PERINEUM IN LABOR

G B. Twitchell (N. Y. Med. Jour.) regards a certain number of perineal tears as unavoidable, but many may be prevented by proper care. It is of primary importance to keep in the vagina a lubricant to facilitate the normal extension. The natural lubricant should be preserved. Digital examination removes a great deal of the lubricant and gets the perineum ready for a tear. The vast majority of digital examinations made during labor are without reason. External palpation should be practised more. Delaying a precipitate labor by chloroform will save the perineum in some cases. In a protracted labor the extraction of the head with the forceps applied before the vagina becomes bruised and dry, will prevent many lacerations, especially as the head can be extracted between pains. M. A. Walker thinks that in many cases it is necessary to retard delivery long enough to allow the pressure of the presenting part to soften and stretch the outlet. Both subjective and objective measures are useful; subjective, such as the mother's refraining from the use of voluntary muscles; objective, as pressure applied by the accoucher directly to the presenting part, retarding its progress and directing its advance through the axis of the outlet. An anesthetic may be required toward the end of the second stage, chiefly for its property of preventing voluntary and lessening involuntary muscular contraction in case of endangered perineum. J. L. Andrews says the whole subject of prevention of perineal laceration may be summed up in a few words, by (1) patiently and persistently endeavoring to bring the longest diameter of the presenting part in relation with the longest diameter of the outlet, and (2) by securing perfect dilatation of the soft parts. Proper position of the patient is important and he insists that, whatever the position, the vulva must be thoroughly accessible to sight and touch. An intelligent use of chloroform or ether, and the proper use of the forceps, are important helps. Many lacerations of the perineum are caused by the passage of the shoulders. These are much less excusable than head lacerations. If undue haste is avoided, and the head lifted upward, one shoulder will be behind the symphysis, while the other is safely borne over the perineum.—International Medical Journal.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. J. R. Morrison has located at Donnybrook, N. D.

Dr. A. H. Russell, of Minneapolis, has located at Kendall, Mont.

Dr. J. R. Peterson, of Madison, Minn., has located in Willmar, Minn.

Dr. H. W. Barbour, of Edgerley, N. D., is in Chicago taking a special course.

Dr. James George has become an assistant of Dr. Adams, at Hibbing, Minn.

Dr. F. C. Miller and Miss Ida Schoregge, of Olivia, Minn., were married last month.

Dr. J. G. McKay, of Big Timber, Mont., was married last month at Russell, Ontario.

Dr. Albert Charpentier, of Belgrade, Minn., has gone to New York for special study.

Dr. G. M. F. Rogers, a graduate of Hamline, class of '99, has located at Buffalo, Minn.

Dr. Eva Shreve, of Sioux Falls, S. D., is taking a special course in surgery in Chicago.

Dr. M. L. Ransom, a graduate of Jefferson Medical College, has located at Foley, Minn.

Dr. E. E. Doty and Miss Ellen O'Rourke, of Red Lodge, Mont., were married last month.

Dr. D. N. Jones, of Gaylor, Minn., announces the opening of St. Mary's Hospital at Gaylor.

Dr. I. C. McDonald, a recent graduate of the State University, has located at Mapes, N. D.

Dr. K. H. Nissen, of Albert Lea, Minn., has gone to Norway, and will be absent until fall.

Dr. D. E. Seashore, a recent graduate of the State University, has located at Battle Lake, Minn.

Dr. James Fleming has become the associate of Dr. Harrington in the Cloquet Hospital, Cloquet, Minn.

Dr. H. G. Blanchard, of Waseca, Minn., was married last month to Miss Katherine Kiesler, of Hutchinson.

Dr. H. B. Allen, of Cloquet, Minn., met with a severe accident last month while driving in the night to make a call.

Dr. H. D. Jenckes, of Pipestone, Minn., is at home after an absence of several weeks of special study in Chicago.

Dr. A. L. Marks, of Ashley, Minn., has sold his practice, and will spend a year in Germany studying in the hospitals.

Dr. Devereux, of Waterville, Minn., has received an appointment as surgeon in the regular army, and is located at Fort Snelling.

Dr. Adolph Stierle, of the City Hospital, of St. Paul, has become associated with Dr. Knauff, of Two Harbors, Minn., in hospital work.

Dr. Helen Hughes, of Mankato, Minn., has taken into partnership her sister, Dr. J. C. Hughes, who has just graduated at Ann Arbor.

The Denver College of Medicine and the Gross Medical College, of Denver, Colo., have consolidated, and become the Medical Department of the University of Denver.

Drs. Sewall & Knauff, of Two Harbors, Minn., have dissolved partnership. Dr. Sewall has purchased an interest in the Rhinehart Hospital, of Ashland, Wis., and will remove to Ashland in August.

ASSOCIATION OF U. S. EXAMINING SURGEONS

The National Association of United States Pension Examining Surgeons was organized at Saratoga Springs, N. Y., on June 9. On account of the large number of these surgeons and the peculiarities of their work, the desirability of such an organization has been felt for some time, and several suggestions have been made with this end in view, but no substantial progress was made until the meeting at Saratoga Springs.

This was successful in every way. A large number of enthusiastic examining surgeons were present, a permanent organization was effected, and officers were elected for the coming year. Several interesting papers were presented and, by special invitation, Dr. J. F. Raub, Medical Referee, favored the Association with a paper, full of invaluable suggestions concerning the work of the pension examining surgeons. This, by vote of the Association, is to be printed and sent to examining surgeons the country over.

During the coming year a vigorous and earnest attempt is to be made to interest every pension examining surgeon in the United States in this organization, and to induce as many as possible to join it. Inasmuch as these number about 4,500, all picked men, it is evident that the Association is probably destined to become an important factor in the medical life of America.

The officers elected for the ensuing year are: Persident, Wm. A. Howe, M. D., Phelps, N. Y.; Vice-Presidents, Wm. H. Hall, M. D., Saratoga Springs, N. Y.; Cyrus L. Stevens, M. D., Athens, Pa.; Charles James Fox, M. D., Willimantic, Conn.; G. Law, M. D., Greeley, Col.; Secretary, Wheelock Rider, M. D., Rochester, N. Y.; Treasurer, Charles H. Glidden, M. D., Little Falls, N. Y.

The Executive Committee is made up as follows: The President, ex-officio, F. W. Firmin, M. D., Findlay, Ohio; John Van Rensselaer, M. D., Washington, D. C.; J. Sutcliffe Hill, M. D., Bellows Falls, Vt.; Warren E. Anderson, M. D., Pensacola, Fla.; Henry Allers, M. D., Newark, N. J.; J. H. Maxwell, M. D., Newton, Ill.; G. Lane Taneyhill, M. D., Baltimore, Md.; and Joseph E. Jones, M. D., DeSoto, Mo.

All members of Pension Examining Boards and all Expert Examiners are eligible for membership, and any such may become a member by sending his name and the dues for one year (one dollar) to the Treasurer, Charles H. Glidden, M. D., Little Falls, N. Y.

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ORGANIZATION OF THE MEDICAL PROFESSION: ITS AIMS AND BENEFITS

By William Asbury Hall, M. D.

MINNEAPOLIS

Members of the Minnesota State Medical Society:—

I wish to return my sincere thanks to your honorable body for conferring upon me the greatest honor in the gift of the medical profession of this state, that of electing me your president. As a token of confidence and respect it is most highly valued, and I shall endeavor to discharge the duties incumbent upon me in such a manner as to win your approval.

The medical societies of to-day are unquestionably the most powerful factors in the uplifting of the profession. They are organized and maintained "with the view to the extension of medical knowledge and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

Let us take a brief survey of the situation as it exists in the profession to-day, and while we take great comfort in viewing our own accomplishments, let us also take cognizance of existing evils, and endeavor to correct them. We know what the surgeon's knife skillfully wielded is able to do for suffering physical humanity, and let us endeavor to apply the same remedy to the body politic of the medical profession.

Probably one of the most serious evils of the medical profession of this country to-day comes from a lack of uniform laws regulating and prescribing the necessary qualifications to enter upon the practice of medicine in the various states of the Union. Some states have good laws, and hardly any two have the same laws. So diverse are these laws that they frequently work a great hardship upon the profession. It is a great question in my mind whether all the medical laws that have ever been enacted have not done more harm to the profession than they have done good. The public have come to look upon all attempts to secure medical legislation as an effort to establish a sort of trades' unionism, and not as an effort to protect the health of the people.

At the time when I graduated in medicine there were no laws regulating the practice of medicine, except that the physician must either be a graduate of a medical college or a licentiate of a county medical society, and both classes had an equal standing. At that time the physician who did not belong to the medical society in the county in which he resided was looked upon with suspicion and reproach. Subsequent medical legislation legalized irregular medicine, and

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*President's Address, delivered before the Minnesota State Medical Society, June 18, 1902.

gave it a standing that it never before had. But the evil has already been accomplished, and, in my opinion, can be remedied only in one way, and that is by the enactment of a uniform medical law that shall be operative in all the states of the Union. This can be brought about only by the united efforts of the medical profession as a whole. It is not too much to predict that, under the present plan of organization of the American Medical Association, in less than five years its membership will embrace more than three-fourths of the physicians of the United States.

It is an absolute impossibility to establish a uniform standard for the various medical colleges in this country. These colleges will go on, in the future as in the past, granting the degree of doctor of medicine, for they have a legal right to do so. But when it shall come to pass that before a doctor of medicine can begin the practice of his profession he must pass an examination conforming to a standard fixed by the American Medical Association, and this examination shall be conducted by official representatives of said association who shall not be connected with any medical college; and having successfully passed such examination he shall become a licentiate of the American Medical Association, and shall be entitled to practice in any state of the Union—then all sectarian medicine, all isms, and all pathies will vanish into thin air, and the educational standard alone will commend itself to the public.

While therapeutics is the aim and end of all medical knowledge, yet a thorough familiarity with the branches of medical science upon which therapeutics should be founded, but is not altogether at present, is absolutely destructive of medical sectarianism. Given that thorough knowledge as a basis, there will be no greater diversity of opinion as to what constitutes proper medical treatment that exists to-day between the several members of the different so-called schools of medicine. I expect to see the day when the American Medical Association will embrace all of the educated, honest and honorable persons engaged in practicing the science and art of medicine.

Another great evil that has become rampant in the profession during the past few years is the spirit of commercialism. This spirit has crowded the ranks of the specialists in medical science with a class of men totally unfit to practice any specialty. Young men fresh from college are taking up specialties, and by their manner arrogating to themselves superior knowledge, which they do not possess; and they are demanding from the public excessive fees for their work. The spirit of commercialism is predominant among them, and they are trying to delude the public. They may succeed for a time, but the public is certain to find them out; and when they are found out the entire medical profession suffers a lack of confidence as a result. True specialism perhaps suffers more from this cause than the profession in general. Special adaptability for certain lines of work can only be ascertained after long years in the general practice of medicine, which has given the practitioner experience, and given him a width of vision sufficient to enable him to draw logical conclusions Our great surgeons, our great gynecologists, our great masters in internal medicine, are, without exception, men of this class. They are men who have worked up to their specialty through years of hard labor, and are not young men fresh from college, nor are they men who have failed in the general practice of medicine from lack of knowledge, and who, recognizing that failure, have undertaken, in a spirit of commercialism, that for which they are not fitted and never will be. These are the men who are bringing discredit upon the profession by trying to corrupt the morals of younger members by offering bribes in the way of commissions for sending them cases. This feature of the spirit of commercialism is, in my opinion, a very serious one, for I believe that many a valuable life has been lost, when had it not been for the desire of the practitioner to reap a fee to which he was not entitled and which he would not have his patient know that he received, the patient would have been sent to the man of riper experience, of greater knowledge and skill, one entitled to rank as a true specialist in medicine and surgery.

I feel free to say this, for I am not a specialist, but an humble worker among the great army of general practitioners of medicine and surgery. I believe that the medical profession is entitled to greater fees than it is at present receiving for its work. It is a notorious fact that the majority of the most successful physicians and surgeons, the men who by their lives and devotion to duty and the men who have been of the greatest good to the communities in which they lived, have died poor men. This is true largely by reason of the lack of business methods shown in failure to collect their just dues. The physician and his family frequently suffer for the necessities of life while his debtor and his family are living in luxury. "The laborer is worthy of his hire," and is entitled to exact it, and he should do so, but let it be for work honestly done.

Another crying evil in the medical profession as it exists in the larger cities at the present time, is the fact that so many men lend themselves to the free dispensaries for the so-called poor. It is well known that the large majority of the patients frequenting the free dispensaries are people who are abundantly able to pay small fees. These people are legitimately the patients of the younger men who are starting out in the practice of medicine, and it is rank injustice for the older and well established men to treat these people for nothing, thus not only taking the bread from the mouths of the younger practitioners, but pauperizing the patients as well. A free dispensary in every city is a necessity, but let it always be under the direction of the public poor department which will certify that the applicant for its benefits is entitled to its services. This need not interfere in the least with the procuring of clinical material for the use of medical colleges, for the dispensary staffs could and should be composed of the clinical teachers in the colleges. Benevolent societies and hospitals under lay management, seeing how eager the medical profession is to do charity work, place the same value upon the physician's services as he himself seems to place, and as a result physicians do not have the weight in the management of hospitals to which they are entitled; and for this state of affairs physicians are themselves to blame.

When the medical profession learns to place the same value upon its services that the legal profession places upon its service, then it will be entitled to, and will command greater respect from the public.

These are some of the most flagrant evils that exist to-day in the medical profession—evils that the profession is itself responsible for, and evils that the profession can correct through its societies.

The question of ethics has, I believe, been permanently settled, at least for a long time to come. In 1884 a minority of the Medical Society of the State of New York by a preconcerted movement packed the convention, and changed its constitution and by-laws in such a manner as to renounce allegiance to the code of ethics of the American Medical Association. This result was the immediate formation of the New York State Medical Association with a membership three times that of the old society. This society has been in most successful operation for the past eighteen years. One by one the seceding members of the old society have come back into the fold of the American Medical Association, and recently at the last meeting of the old New York State Medical Society it passed, without opposition, a resolution that its president appoint a committee to confer with the New York State Medical Association with a view to consolidating the two societies upon a basis of allegiance to the code of ethics of the American Medical Association. The code of ethics f the American Medical Association is, in my opinion, a grand exposition of the principles of upright professional character, and it has been shown that those who oppose it are those who have never read it, or those who are governed by the spirit of commercialism. The spirit of commercialism caused the old New York State Medical Society to renounce it, and after a trial of eighteen years they have found that their action did not pay.

It is with the greatest satisfaction that I can state that during the progress of the last meeting of the American Medical Association at Saratoga there was a conference between the representatives of these two societies. As a result an agreement was reached whereby the unfortunate differences are to be healed, and before the next meeting of the American Medical Association is held at New Orleans, harmony and unity in the New York profession will be an accomplished fact. The conference demonstrated that the differences were not so great or vital as had been imagined, and also that where men get together in a spirit of unselfishness and with a desire for unity, it is not difficult to agree upon a basis that will leave no heart-burnings.

The fact of the dissemination of medical knowledge through the offices of the medical societies is obvious, and need not be dwelt upon at length. The carefully prepared papers, and especially the discussion of the same, make an impression upon and educate the profession at large in a manner not obtainable by other means; but the greatest good to be accomplished by medical societies is yet to be mentioned, and that is the cultivation of the spirit of good fellowship. Good fellowship is the strong lever that moves the world, and all the powers of darkness cannot prevail against it. The spirit of good fellowship brings out the best that is in every man. The spirit of good fellowship is the means of the greatest successes in all lines of business, and is the one prime factor in keeping the peace of nations. The profession of medicine is one that is peculiar, inasmuch as its practice does not require as a rule close association of its members, and therefore, as a result, physicians do not find out each other's good qualities, so that we see bickerings and jealousies cropping out that would not exist were the members brought into more intimate contact. This can only be done in our profession by means of our medical societies. The lack of such personal contact is responsible for there not being more county medical societies in existence in the state of Minnesota than there are at present. The members of the profession have not recognized the great good to be derived from association and the cultivation of this same spirit of good fellowship. A united profession is always a strong profession, and always commands the respect of the public. The American Medical Association in its plan of reorganization adopted at its annual meeting at St. Paul last year, bids fair to solve this problem. By its plan no physician can become a member of either the state or national association unless he is a member in good standing of his county medical society. He must be vouched for by his county society, which is to be the unit of all societies. The affairs of the American Medical Association will henceforth be conducted by the official representatives of the state societies, and the county societies will dictate who shall become members of the state societies.

It has been my pleasure to attend the last meeting of the American Medical Association held recently at Saratoga Springs, N. Y., and it was extremely gratifying to note the large and representative delegation present from Minnesota. The different sections were well attended, and the meeting was devoid of the usual feature of medical politics. The House of Delegates was in almost continuous session, and did its work well. The members of the House of Delegates consulted freely upon important matters with the delegations whom they represented, and it was the unanimous verdict that the plan of organization of the association was a great success. The address of the president, Dr. Wyeth, was a masterly effort, and will repay a most careful perusal. Some of its closing passages are so apropos that I will briefly quote them. He said:

"Let us ask ourselves plainly: Is the medical profession of the United States what it should be? Has it won the influential position to which it should aspire? Has it gained the power to secure just and proper legislation? Has it lived up to its obligations, and has the American Medical Association, which claims to represent one hundred and twenty thousand regular practitioners of medicine in the United States, fulfilled its mission? How many of us after due reflection can consistently answer these questions other than by saying plainly and regretfully, No. And wherein lies our weakness? To say we are part of a young and scarcely organized country, and that our profession is widely dispersed over vast regions so remote from each other that contact and co-operation are difficult, will not entirely satisfy the fairly critical mind. Such excuses might have been sufficient at an earlier date, but not now. To say that, despite these and other embarrassments, we of the United States have given to mankind the unequal boon of ether anesthesia; that, through the achievements of members of our profession and of this Association medical and surgical science has been greatly enriched; that great specialties recognized the world over have been developed; that operations, bold and original, have been established beyond controversy; and that by reason of these various contributions to the science and art of surgery and of medicine, millions of lives have been already saved, together with the merciful mitigation of suffering which all this implies. While a repetition of this may flatter our vanity, it will not wholly satisfy us when in honest purpose we realize how great are our shortcomings.

"It is a fact, painful to acknowledge, that of the three so-called learned professions—the ministry, law, and medicine—ours is accorded the inferior position, and we who, day in and day out, in every home of the land are clase in the personal friendship of our patients, and are respected and loved as individuals, are incapable of wielding by organization and discipline the powerful influence of a united profession aiming at a high and honorable purpose. And what have been the results of this house divided against itself? Witness the snail-like progress which marked the various steps in securing our laws for elevating the standard of requirements in medical education and for medical practice; witness the opposition to our efforts in securing better sanitary regulations, and in the struggle to protect the public from the horde of uneducated or misguided persons who, under the guise of Christian Science, Osteopathy, and other schisms, insist upon being permitted to take charge of and treat human beings suffering from disease without submitting themselves to the state examination legally required of us.

"There are, in my opinion, two principal causes of this evident weakness of the profession: first, the insufficient methods of medical education which have prevailed for the greater part of the first century of our national existence; second, the lack of organization.

"The code of this Association says: 'Those admitted into our ranks should found their expectations of practice upon the extent of their qualifications.' We stand committed as the champion of higher medical education and the elevation of the standard of requirements applicable, not only to the entrance examination, but to a rigid examination before the degree is received, as well as by the state before permission to practice is granted. To this rigid examination this Association, by its rules of conduct demands another important essential. The highest order of learning, the greatest amount of skill may not make one an honor to our calling; for 'there is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical, and to attain such eminence is a duty every physician owes alike to his patients and his profession.'

"The American Medical Association is the sponsor for organized medicine in the United States, and failure of this Association to accomplish this end implies the failure of the Association. We must not fail, nor will we fail unless we falter in carrying out the plan of reorganization in the liberal and progressive spirit which characterized the session of 1901. It is our plain duty to endeavor to bring about the adoption by the various constituent bodies of a practically uniform constitution and by-laws for each county and for each state, modified only as the local conditions may require, and all governed by the same rules of conduct."

And now, in conclusion, let me urge upon this Society a favorable consideration of the report of the committee on reorganization that is to be presented at this meeting. This committee has worked faithfully in preparing for this Society a constitution and by-laws that will bring its workings in harmony with the requirements of the American Medical Association. Undoubtedly, in a few years it will require amendments to meet changed conditions; but it has seemed to the committee that its recommendations extend as far as practicable at the present time. When the county medical societies of this state are thoroughly organized this Society will have a roster of fifteen hundred members, which will necessitate some changes in the manner of conducting the Society, and those changes can be made at the proper time. When that time comes the membership of the American Medical Association will be at least one hundred and twenty-five thousand, and the profession of this great country will be organized in such a manner as to be effective in wiping out abuses and in procuring such legislation as is necessary.

Then the spirit of good fellowship will prevail, and all the other ends for which medical societies are organized will be attained.

OVARIAN NEURALGIA

The following pill has proved of great service:

℞ Camphor monobromide, gr. iss.
Powd. capsicum, gr. ij.
Confec. of roses, q. s. ad I pill.

—N. Y. Med. Jour.

THE INFLUENCE OF AGE UPON SURGICAL OPERATIONS*

By James E. Moore, M. D.

Professor of Clinical Surgery, University of Minnesota

MINNEAPOLIS

While we all feel that there are additional dangers connected with operations upon infants and aged people I am convinced that many of the real dangers have been exaggerated and that many supposed dangers are purely imaginary. I have no knowledge of a death following a surgical operation which could possibly be attributed to the age of the patient, but I have known of many patients denied the advantages of an operation on account of their age. Granting that there are additional dangers from operation upon these patients, we must also remember that they have less resisting power with which to contend against the conditions for which operations are indicated and that they will more readily succumb to these diseases than persons in middle life.

Tissue repair is very active in infancy. Solutions of continuity in both bony and soft tissues are repaired in less time than in adults. It is quite generally believed that repair is tardy and uncertain in aged persons, but I have not found it so in practice where the wound is aseptic. It is a generally accepted fact in surgery that old people do not do well with suppurating wounds. I have no reason to believe that they are specially liable to pyogenic infection. We have all learned that we can expect bony union of fractures in old persons in the average time and with even a greater degree of certainty than in middle life. Ununited fractures occur in the majority of instances in persons under forty years of age. Ununited fractures of the hip are due to causes entirely independent of the age of the patient.

A large mortality-rate has heretofore accompanied operations upon the aged, but it is very largely due to the fact that these patients have been denied the advantages of operation except in extremis. Imperative surgery is accompanied by a high mortality-rate at any age.

The objections to operations in childhood seem to be based entirely upon prejudice, for I can find no facts whatever to sustain them. Personally I have found that young children bear operations remarkably well. They have good hearts, good lungs, and good kidneys; why should they not be good subjects for surgery?

Oliver Wendell Holmes said that a man is as old as his arteries. From a surgical standpoint I think we can truthfully say that a man is as old as his kidneys. In 1893 Dr. Chas. L. Gibson wrote a very excellent paper bearing upon this subject, taking as a basis a report of all patients over seventy years old operated upon in St. Luke's Hospital, New York, for thirty-three years (Annals of Surgery, Vol. 18, page 426). There were sixty-five cases operated upon with a mortality-rate of 24.5 per cent. This was all imperative surgery, and one-half of the deaths were due to uremia. Many of the patients were old men with enlarged prostates with accompanying cystitis and nephritis. Many of the cases were operated upon in pre-antiseptic days, and quite a few died septic. An interesting point brought out in this paper is that all of the deaths from uremia occurred between the eleventh and thirty-second days, the average time being fifteen days.

Dr. James P. Tuttle contributed an article to the Journal of the A. M. A., May 9, 1901, entitled "Results of Surgery in the Aged," in which he reports one hundred and thirty-one patients operated upon who were over sixty years old, with a mortality-rate of a little less than 3 per cent. This illustrates, in a measure, the advantage of modern methods over older methods when compared with Dr. Gibson's report of 24.5 per cent mortality, but Dr. Tuttle rejected as unfit for operation all cases in which there were serious kidney lesions, and, as a consequence, had no death from uremia, which caused one-half of Dr. Gibson's mortality-rate. Dr. Tuttle says his patients did not suffer from shock, and maintains that the fact that a person has lived to an advanced age shows that he has either had naturally a strong constitution or that he has taken good care of himself, either of which makes him a good subject for operation.

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*Read before the Minnesota State Medical Society. June 18-20, 1902.

Old people as a class are not choice subjects for operation, but this is not because of their age per se, but on account of diseases that may exist. Diseased kidneys, atheromatous arteries, weak hearts, and chronic bronchitis are the most common unfavorable conditions met with, but none of these, except the atheroma, are peculiar to old age.

Much has been said of the dangers of anesthesia in the extremes of age, but the truth is that children bear anesthetics exceptionally well, and healthy old people are very good subjects for anesthesia. Chloroform is undoubtedly the best anesthetic for both children and aged people. This is admitted by many who are strongly prejudiced in favor of ether. Prolonged anesthesia is neither safe nor justifiable in either infants or aged people.

Every old person upon whom an operation is about to be performed should have all of his organs, especially the kidneys, very carefully examined, but this rule applies alike to all ages, and the surgeon who does not follow it systematically is sure to meet with some uncomfortable surprises, and an occasional death that with proper care could have been averted. Neither a moderate degree of valvular heart disease or albuminuria is a contraindication to anesthesia. Conditions frequently arise when an operation becomes imperative even in the presence of grave kidney lesions; in fact, the recent evidence of Edebohls, Ferguson, Guiteras, and other reliable men leads us to believe that we may in future relieve some of these kidney lesions themselves by surgical intervention. When recognized, as they always should be, much can be done in the way of preparatory and after-treatment to avert the danger of uremia. The skin should be stimulated to healthy activity in every possible way. Judicious bathing, followed by brisk rubbing, is very helpful. Abundance of water taken internally helps to flush out the kidneys and to stimulate them to do their best without overworking them. Hypodermoclysis before the patient revives from the anesthetic, repeated later or followed by enemata of salt water, are of inestimable value in these cases. It has been my practice for some time to get feeble patients, no matter from what cause, and robust patients who are about to undergo a dangerous or tedious operation, well under the influence of strychnia before operation, and by so doing I know that I have averted shock, and I believe that I have saved life. For example, under this treatment I have been enabled to remove a very large sarcomatous kidney without any evidence of shock whatever. To an average adult 1-30 of a grain of strychnia is given hypodermatically every six hours, beginning two or three days before the operation, and an extra dose of the same size is administered about one hour before the operation.

Very young children are not fit subjects for bloody or prolonged operations because they do not bear the loss of blood well, and they are prone to shock. With our modern methods of hemostasis the first danger is reduced to the minimum. The tissues are very vascular and bleed freely, but when all of the blood vessels are promptly cared for the capillary oozing will not be dangerous. It is my practice to give strychnia to every child upon which an operation of any magnitude is to be performed, in doses proportionate to its age. The little one should always be wrapped in blankets during the operation, and its bed should be thoroughly warmed by hot-water bags. I am sure that our adult patients often suffer from loss of heat from undue exposure while upon the operating-table and during transportation to and from the operating-room. A special effort should be made when operating upon children to shorten the time consumed in the operation.

It is impossible in this brief paper to even mention all of the subjects upon which age has an important bearing, but brief attention to a few may be of interest.

A new era has just opened up in prostatic surgery, and in the next five years greater advances will be made in his branch of surgery than in all time before. When a patient with an enlarged prostate comes to the surgeon the question should not be, how many years has this patient lived, but what is the condition of his kidneys? Many causes have contributed to the unpopularity of prostatectomy, chief among which, of course, was the high mortality-rate, but this mortality-rate was due to bad technic and to the fact that patients were not operated upon until their kidneys were destroyed, and not to the age of the patient. This mortality-rate has been greatly reduced within the past year by the development of the perineal operation, and as soon as we get our patients educated to accept the operation before the kidneys are involved it will become a safe and popular one.

Many old people afflicted with hernia suffer so much from it that they get but little pleasure or comfort out of life. The age of the patient should not interfere with operation in these cases, for old people bear it well.

Hemorrhoids are also a frequent cause of suffering and ill health in the aged, which can and should be relieved by operation. Thus I might go on indefinitely, but this is sufficient to illustrate the point I wish to make, viz., that a patient need very rarely be denied the advantages of a surgical operation on account of his age.

In the consideration of the surgery of infancy we naturally think of congenital deformities first. Generally speaking the earlier these defects are operated upon the better. It is a very common practice of family physicians to advise the parents of a child born with clubfoot to wait until it is two or three years old before having it treated. This is very bad advice for which there is no excuse, because a newborn babe can bear the treatment as well as an older child. These cases should all be treated early so that when the child begins to walk he will walk upon the bottom of his feet. Harelip can as well be treated in the first few weeks of life as later, and where the deformity is such as to interfere with the child's taking nourishment it should be operated upon at once. The consensus of opinion is that cleft palate, whether accompanying a harelip or not, should be left until the child is from two to four years old, because the operation upon an infant is dangerous from hemorrhage and those operated upon later seem to talk as well as those operated upon earlier. All cases of well-marked spina bifida should be operated upon, because the operation is reasonably safe and satisfactory, and without operation the patient either dies or lives in a condition worse than death.

Age has an important bearing upon the treatment of rachitic deformities. Up to the time when the patient's bones become hardened, which is usually about the fourth year, these deformities should be treated by braces, but after hardening has taken place the sooner they are operated upon the better.

Tuberculosis of joints and bones occupies a very important place in the surgery of childhood. Most of these cases can be treated best without operation, but it is a very grave and unfortunately a very common error to allow a child to go from bad to worse, and even to become generally tubercular under mechanical treatment when a timely operation would save it. Those who are most frequently guilty of these mistakes call themselves conservatives, but the truth is they are just the opposite. The knife is many times the greatest conservative agent. As a rule operations upon children's joints should be atypical, removing only the diseased tissues, thus preserving the growth-centers, and often saving motion in the joint. A typical resection of a joint in a child is seldom justifiable because it leaves a shortened unsatisfactory limb. This is certainly true of the knee-joint.

Just how old a child should be before an operation for the radical cure of hernia is advisable, is not definitely settled, but since we have so perfected our technic we are operating at an earlier age each year. Personally I believe that an operation by an experienced surgeon is safer and better than a truss at any age. A few months ago I operated upon a patient of the late lamented Dr. Cutts for strangulated hernia, who was about two months old and who had been a seven months baby. The patient weighed less than ten pounds, but notwithstanding his age and size the radical operation was performed with an eminently satisfactory result. He took the chloroform beautifully, and had very little disturbance afterward.

ACUTE BRONCHITIS

℞ Tinct. scillæ, *m* x.
Syr. codeinæ, ℥ v.
Ext. hyoscyami, gr. j.
Aq., aurantii florum, ʒ iiss.
Julep, ℥ iv.

M. Sig.: One dessertspoonful.—Lyon, Le Progres Med.

COCAIN ANESTHESIA IN MINOR SURGERY*

By J. W. Robertson, M. D.

LITCHFIELD, MINN.

In the use of cocain as an anesthetic it is absolutely necessary that we should know the physiological action of the drug. Corning says: "Cocain given in moderate doses (from ¼ to ½ gr.) acts as a stimulant to the heart's action, while at the same time its characteristic effect, mental exhilaration, is also apt to appear, especially if the hypodermic method of exhibition has been employed. When, however, it has been given in excessive doses (from 5 to 10 grs.) the phenommena induced are of a distinctly threatening character. Among the more striking manifestations are abnormal exaltation of the feelings, loquacity accompanied by mental incoherence, severe sweating, fall of temperature, shallow, irregular respiration, nausea, feeble pulse, and ultimate collapse. While the production of these graver occurrences demands, as I have said, in a majority of cases relatively larger doses, the rule is by no means invariable, for again and again it has happened that small amounts of the alkaloid have given rise to most threatening symptoms. Especially when the drug is used about the head should care be exercised in its administration, for here it is apt to reach the nerve-centers in a state of relative concentration, and give rise to symptoms altogether out of all proportion to the quantity administered.

In a recent issue of the Northwestern Lancet occurs the statement:

"The three disagreeable after-effects following the employment of cocain intraspinally are headache, vomiting, and rise of temperature. According to Dr. Cordero, all these after-effects may be obviated by the administration of amyl nitrite."

Another operator insists that cocain cannot be sterilized and that there is always danger of infection.

I could quote many cautions in this same line by numerous physicians, and it makes an operator feel that he is continually treading on dangerous ground.

Now, for many years I have been using solutions of cocain in all operations about the eye and nose, and have never seen a single bad symptom which I could attribute to the effects of cocain.

About five years ago I began using hypodermic injections of cocain in many minor operations, but I was very careful not to use the injections where the circulation could not be interrupted. I got a case one day,—it was a large wen on the top of the head,—where the patient had chronic heart disease and asthma, and I preferred to take the chances with cocain injection rather than give an anesthetic. I used a 2 per cent solution, and made the operation without any trouble, and the patient had no pain or bad effects from the cocain, in fact she said "that the only thing she noticed was the numbness of the scalp."

My next operation was the amputation of the second toe in a very nervous girl. My next was the removal of a great-toe nail. I then ventured to enucleate a cancerous gland from the neck of an old man. Being successful in this, I tried it in the enucleation of an eye-globe, which is getting quite near the nerve-centres. I had to use large quantities of a 4 per cent solution to relieve the pain in this case. I also tried it in a large fatty tumor of the neck, with good results.

I kept using stronger solutions without any of the terrible physiological symptoms mentioned by many operators. I finally was requested by a very prominent member of this Society to remove a small sebaceous cyst from beneath his ear. He had been using cocain hypodermically in minor operations for some time with very good results, and had no objection to it being used upon himself. A few drops of an 8 per cent solution was injected into the skin at the site of operation, and the tumor dissected out. This was the first time that I ever got any of the prominent symptoms attributable to this drug,—exaltation of feelings and loquacity. These symptoms were quite marked, but instead of being disagreeable they were just the opposite. The doctor suggested, however, that I would get just as good results by using weaker solutions of the drug. I followed his suggestion, and tried a 1 per cent solution in a small necrosis of the foot with equally good results. Since then I have used nothing stronger, although I used it in making an incision in the back for a perinephritic abscess near the right kidney in a very nervous person.

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*Read before the Crow River Valley Medical Society, June 19, 1902.

Formerly I used the chloride of ethel as a freezing mixture for a local anesthetic in many minor operations, but now I use it only where I have an abscess or something of that kind to open.

I reported at our last meeting an operation under cocain in a case of an immense strangulated hernia. Since then I have made an operation for removal of a cancerous gland which lay deep in the tissues of the neck, and an epithelioma of the lip, in which considerable tissue was removed. My last operation under cocain anesthesia was the repairing of an extensively lacerated cervix, with success which even exceeded my own expectations. I have also used in in several cases where needles were removed from the hands and feet after location by means of the *x*-ray.

In all I have made more than one hundred operations, not counting the eye operations, under cocain anesthesia; and I am now doing seven-tenths of all my surgery with this local anesthesia, and have not seen any of the terrible symptoms mentioned by very many authors.

There are five principal methods for producing cocain anesthesia:

The first and most common is the Schleich infiltration method, which is to introduce the point of the syringe-needle just into the skin, and then introduce the needle-point into that portion of the skin thus anesthetised, and inject it still further on, etc. With this method you are all familiar.

The second is Corning's method, which is practically the same as the Schleich, except he uses a specially devised syringe, and after the cocain solution is injected he injects an oil and infiltrates the surrounding tissue with it. As the oil hardens it holds the cocain in the tissue for a long time. It is indeed a unique way of prolonging the anesthesia.

The third method is known as the block system. The solution is injected into the nerves supplying the part to be operated upon, which immediately stops all pain below the injection.

The fourth, or spinal anesthesia, is to inject the solution into the spinal canal between the tenth and eleventh dorsal vertebræ, producing anesthesia below the injection. This method is in reality a block system.

In the fifth we have a method of producing local anesthesia with cocain which is frequently used by dentists, and that is cataphoresis, the diffusion of cocain into the deep-seated tissues by means of electricity. I think this will some day be developed so that we can produce local anesthesia in any part of the body and to any extent desired.

The reasons I call the attention of the Society to this method of anesthesia are—

1. It is far preferable to the freezing with ethel chloride, because it is much easier to operate upon normal tissue than when it is frozen, and also because the anesthesia lasts much longer.

2. Our patients do not have the nausea and vomiting so commonly exhibited after taking ether or chloroform.

3. We can make all minor operations at our offices, and the patient can get up and drive home into the country as soon as the dressings are in place.

4. There is not the fear of an operation where it is known that the subjects do not have to take an anesthetic.

5. I do not believe there is any danger in the employment of cocain if proper care is used.

6. I do not believe there is any danger of getting infection from the injections of cocain or eucain if the solutions are properly made.

7. This anesthetic can be used where chloroform and ether would be dangerous, as in very young and very old people or in persons suffering with organic disease of the heart.

THE PIONEER DOCTORS OF THE MINNESOTA VALLEY*

By J. W. B. Wellcome, Sr., M. D.

SLEEPY EYE, MINN

FOURTH PAPER

Dr. Moses R. Wickersham, of Mankato

Dr. Wickersham located in Mankato in 1856, and at once commenced the practice of medicine. He hailed from Indiana, where he studied medicine. He was a pleasant and affable gentleman in his intercourse with the people, and was very unassuming, especially with the physicians with whom he associated. He made no pretence of knowing more than his competiors, and had but little confidence in his own ability, and was always ready to counsel with physicians who he thought were better qualified than himself. He had the faculty of cheering up his patients even when their hope of life was small. He was especially fond of children, and his love for them was reciprocated. He attended strictly to business, and his kind heart and unbounded charity soon gave him a good practice. He faithfully responded, day or night, to all sick calls. It was said of him that he not only took medicine to the sick in poor families, but in extreme cases of poverty brought food to the destitute, often forgetting himself in his anxiety to do his duty. Nearly all the people in an early day in Blue Earth County knew him personally. In 1862, at the time of the Indian War, he did much for the sick and wounded, being always ready to do gratuitous work for the sick and needy. In 1863 Dr. Wickersham was appointed government physician for the Winnebago Indians, and when they were removed from their reservation in Blue Earth County to Fort Thompson, Nebraska, he went with them, and remained three years as their physician, faithfully discharging his duty to this uncivilized tribe of Indians. He then returned to his home in Mankato and resumed practice. He had a continuous practice in Mankato with the exception of the three years that he was with the Indians and a short time in Montana, from 1856 till his death, which took place in Mankato in 1892.

He was a poor collector, as is the case with most generous-hearted physicians, and had but little financial ability. He appeared to be more happy in giving than in receiving. His health was poor for a number of years previous to his death, and he did but little professional business.

Dr. C. O. Cooley, of Madelia

In writing up the history of Dr. C. O. Cooley I feel that I have not the ability to do him justice. He came to Minnesota Valley in 1876, fresh from Washington University, where he graduated, and located in Madelia, Watonwan County. He was a student of medicine of rare ability, and a man of fine personality, suave, sharp in his perception, a good reader of human nature, but not accustomed to a new and sparsely settled country. All was new to him, unlike the East where he had been accustomed to living in luxury, but like most young men of the East who have the ambition to come to the West to grow up with the country, he put on his armor and went forth, always ready to respond to sick-calls, day or night, rain or shine. He saw that in the virgin soil of the Minnesota Valley there was wealth, that the West would become perhaps in his lifetime a mighty empire, having all the advantages of the East.

At the time he settled in Madelia, doctors were scarce and far between. He had to battle with the elements in attending the sick, with deep snow and drifts in winter, and deep mud in fall and spring; but no matter how the winds blew, how deep the mud or snow or how great the blizzard he plowed through. He is a man of warm impulses and nothing deters him from his professional duty. On he went, regardless of his own comfort, till he had achieved success as a physician, and to-day the physicians of Minnesota Valley regard him as one of the best country physicians of the State of Minnesota, one competent to compete with any of the physicians of the cities in the general practice of medicine.

In 1876 when the Younger brothers made a raid on the Northfield bank and were captured at or near Madelia and severely wounded, Dr.

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*Read before the Minnesota Valley Medical Society, May 6, 1902.

Cooley dressed their wounds and gave them such medical and surgical aid as they required. He is a member of the Minnesota Valley Medical Association, State Medical Society, and of the American Association. I close this brief history by saying that the rising generation of Madelia and vicinity will long hold in remembrance Dr. C. O. Cooley.

Dr. George Winch, Blue Earth City

Dr. Winch came from Wisconsin to Blue Earth City about 1867. He was a graduate of Rush Medical College, but the year I do not remember. He was a surgeon in a Wisconsin regiment in the War of the Rebellion. After he located at Blue Earth City he enjoyed a very large practice all over Southern Minnesota and Northwestern Iowa for twelve years, when he died. He was about thirty-eight years of age at the time of his death, which was a great calamity. He was a very good surgeon and an excellent physician, and a very energetic and zealous man. He was the leading surgeon in an area of fifty miles at the time of his death. Very little is known in the Minnesota Valley of his education or family history. He was very popular with all the physicians in the State of Minnesota with whom he became acquainted. His opinion seemed to be authority with them. His personality had a peculiar charm to all who came in touch with him. His counsel was sought by all the physicians in the Minnesota Valley in difficult cases when it could be obtained. He had an iron constitution, and lived a large part of his time traveling to and from his patients, and at their bedside. He kept from six to eight horses and a driver, and has ridden thousands of miles while asleep in his carriage built for his use. At the time of the great blizzard in the winter of 1863 he was called to Chain Lakes, Martin County, to attend a sleigh-load of young people who had been caught in the storm on their way home from a singing-school, 13 or 14 in number, of whom four or five were frozen to death. He amputated some six or seven limbs for the survivors of that sleigh-load. Having by mistake left his instruments at home, he went to work, and made a tenaculum, and with a butcher knife performed the amputations, and gave the sufferers $50 in money. He returned to Blue Earth City the same day, and raised two or three hundred dollars among the people, and sent it at once to the sufferers. Those who had their limbs amputated all recovered. The doctor was a generous, whole-souled fellow. He was six feet two inches tall, well developed every way, and a man of great strength and endurance. I was well acquainted with Dr. Winch in his early practice in the Valley, and frequently called him as counsel, and always found him a gentleman, honorable and interesting. I visited him two weeks before his death, and found him very much overworked. He told me that he was going to take a vacation for a couple of weeks, and come up to see me and some friends he had at Fort Ridgley. His exposure and hardships were the cause of his premature death. He lives in the hearts of the old settlers, among whom he spent the best years of his life. He left a good fortune to his heirs, which he had accumulated by his professional work. He had never married.

Dr. W. W. Clark, of Mankato

The writer regrets that he has not a fuller knowledge of Doctor Clark's early education. So far as my knowledge goes, and I have had a long acquaintance with him, I am of the opinion that, previous to his entering the medical profession, he was self-educated. He came to Mankato in 1857, practiced here until the breaking out of the Rebellion, when he was appointed assistant surgeon of the 10th regiment, Minnesota Volunteers. He was very popular with the regiment, and did good surgical work. At the close of the war he returned to Mankato, and resumed his practice. He had some eccentricities, and was somewhat egotistical, but notwithstanding such trifling faults he was a blessing to the people on the extreme frontier, and there were many accidents where his services were urgently demanded. So far as I have any knowledge he was quite successful in his practice. He had many warm friends, and some enemies as doctors generally have in the medical profession, which I think was the result of his pecularities, for at times he was a little stiff and crusty. He had a fine practice, was a man of strong personality, and was very positive in his own opinions. He graduated from Cincinnati Medical College in 1864. He was a member of the Minnesota Valley Medical Society, organized in Mankato in 1865. He died in Mankato several years ago.

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STATE MEDICAL SOCIETY APPOINTMENTS

Dr. J. W. Andrews, the President of the State Society, has appointed Dr. W. S. Fullerton, of St. Paul, State organizer for the coming year. The appointment is a good one, for Dr. Fullerton is well qualified as a physician and diplomat. He is an earnest worker, and usually gets what he is in search of.

The duties of an organizer will require his occasional presence in distant and sparsely-settled counties, where it will be necessary for two or more counties to unite in forming a medical society.

The Lancet urges physicians to assist the organizer in every possible way, sinking individual preference for general professional harmony.

The publication committee selected by Dr. Andrews consists of Dr. Geo. D. Head, Dr. Max Vander Horck and Dr. W. E. Rochford, of Minneapolis, and Drs. Arthur Gillette and Frederick Leavitt, of St. Paul.

Dr. Arthur Sweeney, of St. Paul, succeeds Dr. Bracken as a member of the committee on medical legislation of the American Medical Association.

Other appointments will follow.

CLUBFOOT

A. Ogston, in the British Medical Journal for June 23, 1902, describes a method of correcting deformities of the feet in a way that causes no injury to the joints, because they are not opened, and neither are the ligaments interfered with. A curved incision is made over the outer part of the tarsus from the external malleolus to the calcaneocuboid joint. He then divides the cartilaginous shell surrounding the osseous center of the astragalus, enucleating the bony kernel with a Volkmann spoon. The bone is then so plastic that it can be moulded into any desired shape. If this is not sufficient the cuboid and os calcis may be treated as was the astragalus.

Restoration occurs by ossification, and perfect motion in all articulations is obtained.

The operation is claimed to be superior to the older and less satisfactory methods.

The correction of clubfoot is an important element in orthopedic surgery. Within the past few years the surgeon has endeavored to relieve these defects by scientific replacement of the tarsal bones rather than to adjust misshapen apparatus that intensifies the apparent deformity. With a better understanding of joint manipulation, the old brace will gradually occupy a less prominent place in orthopedics.

This leads to the inference that the average medical man, or the surgeon who is interested in portions of the body higher than the feet, neglects his opportunities or is indifferent to the unsightly errors that are so frequent in children.

In a large number of cases the deformity might be permanently remedied by proper position, harmless surgery, and a careful attention to the normal movements of joints, the better appreciation of normal muscular tone, and exercises that would benefit the feeble muscles before they become distorted.

Perhaps this explains the occasional success of the so-called fakir who, by practice or intuition, reduces deformities by manipulation alone, then holds the joint in position long enough to allow the shortened muscles and ligaments to elongate and the lengthened structures to contract. In many instances the improvement lasts until the operator has removed to newer and greener fields. In a few cases, however, the improvement continues with permanent benefit.

The study of kinetic therapeutics has too long been neglected, hence the unfortunate results in those cases where the surgeon uses only the knife, and pays little heed to the benefits of massage and Swedish movements.

The simpler method advocated by Ogston will doubtless stimulate renewed efforts by the surgeon.

THE TREATMENT OF INSANITY IN GENERAL HOSPITALS

The establishment of a psychopathic hospital should be the aim of every large city. The municipal and political objectors have so far been unable to appreciate the necessities of such an institution, or have frustrated efforts made in its behalf, on the grounds that available funds are not in their hands, or that the general city hospital is the proper place for such patients.

The lack of money is a valid excuse, but the creation of such a hospital must come, sooner or later, particularly in cities where the large number of mental cases recklessly and hastily committed to state institutions will so seriously overcrowd them that relief will be demanded by force of circumstances.

Overcrowding of state hospitals will impair the work of scientifically treating the sick and insane, and will make the institution an asylum rather than a hospital.

The executive care of such large numbers is a difficult problem, and entails the expenditure of such sums of money for commitment and maintenance that it becomes a serious or indifferent burden to the legislator.

Attempts have been made from time to time in Minneapolis, St. Paul, and Duluth to establish detention hospitals, but for various reasons such efforts have failed. The State Board of Control, however, was authorized to designate a hospital in each city for such detention. The result has been fairly successful in St. Paul, as the City Hospital is large enough to meet the demand. In Minneapolis the City Hospital is incomplete, and the city physician has been unwilling to assume the care of detention cases to the exclusion of others that required less care and attention. The Board then designated a private hospital in the outskirts of the city. A few patients have been admitted that were easily managed, but on the whole the experiment has not been a success.

There are many objections to the admission of the insane to general hospitals: the noisy ones disturb other patients; the aimlessly confused require too much seclusion; and the depressed are inclined to suicide. There is a certain class, however, who can be successfully cared for, namely, those who are temporarily unbalanced from accident or incident or removable disease states; those who are exhausted from overstrain or overwork; and the few that are restored by minor or major surgical operations.

There is no question that these cases can be as well treated as in the state hospitals; the city or county is saved a large outlay; and the patient is not subjected to legal restraint and curtailment of personal liberty, accompanied by the lifelong idea that he has been legally adjudged insane.

The presence of such patients in our general hospital is a clinical education for physicians unfamiliar with insanity; the training of nurses is advanced by the attention and direction of treatment required in such cases; and then, too, the patient may have the benefit of consultants in various specialties and the benefit of varied advice.

On the whole, there should be less objection to the care and treatment of selected cases in private or general hospitals,—not that they are not well treated in the state hospitals, but that they may be saved unnecessary travel, annoyance, and chagrin. The advantages to the patient and physician in the general hospital will often repay both for the temporary detention, provided the physician is sufficiently familiar with the different forms of insanity to decide which case is suitable for the general hospital and which for the state institution.

One must consider well the responsibility in the care of the insane outside of special hospitals, arising from the lack of care on the part of the hospital and nurse, the failure to recognize mental states due to degenerative diseases, and the promptness with which the patient is treated.

In many instances the removal of the patient from old surroundings and associates, the enforced and prolonged rest, and the recognition and removal of simple disease conditions, will inspire courage and confidence in the patient to such a degree that the mental symptoms subside permanently, and the recovery from the physical ailments is assured.

The failure to recognize and appreciate degrees of mental depression is by far the greatest danger the physician encounters. The unfortunate individual who is much unbalanced, yet sane enough to conceal the depth of his mental despair, is the one who should be most carefully watched and guarded. Suicidal attempts are so frequent in such cases that it is not to be wondered at that general hospitals decline, on principle, to admit any forms of mental disease, for fear of the disgrace and confusion that follow the successful suicide.

On the other hand, many cases of melancholia might be saved for recovery if their condition was recognized early, their detention promptly enforced, and their every movement watched until the mental storm had passed and the physical state been restored.

The uselessness of detaining a class of patients who have all the stigmata of degeneration, in private or general hospitals, has been demonstarted often enough; yet there are a few cases of this class who can be so far improved by rest and treatment that the experiment is a success, and the patient returns to his home or business, temporarily or permanently benefited, with the effect of his treatment or mental discipline impressed upon him to such a degree that he avoids the errors that promoted his mental downfall.

The general hospital should be encouraged to receive a limited number of suitable cases, and provide rooms or wards for their reception and nurses trained in the care of the insane.

ANTIPYRETICS IN CHILDREN

McGee, in Cleveland Med. Gaz., states that there is frequently no need of reducing fevers in children, but when he does use an antipyretic of this group his preference is for phenacetin. He gives one to three grains to a child two to five years of age. According to Hare, antipyrin is safest, especially in treatment of the paroxysms of pertussis. It may be given in doses of two or three grains daily for each year of the child's age. Phenacetin, however, is more useful as a sedative in the treatment of influenza in children.—Jour. A. M. A.

REPORTS OF SOCIETIES

BLUE EARTH VALLEY MEDICAL SOCIETY

The Blue Earth Valley Medical Society comprises the counties of Faribault and Martin. Its regular meeting was held at Fairmont in July, and was well attended.

The meeting was presided over by Dr. Jacobs, of Elmore, vice-president of the association. Dr. Hunt, of Blue Earth, read a paper on "Pneumonia;" Dr. Smart, also of Blue Earth, on "Electricity," and Dr. McCann, of Fairmont, read one on "Hydrotherapy." After the close of the meeting the physicians and their wives took a steam-boat ride, and at five o'clock the party took dinner at the Bullard House.

EASTERN DAKOTA MEDICAL SOCIETY

The Eastern Dakota Medical Society held its July meeting at Elkton, S. D. Several out-of-town physicians were present. The program consisted of an address by the Hon. J. P. Alexander on "Legal Medicine." Dr. F. S. Hull eulogized "J. H. Kellogg and His Work." Dr. Wm. Wakefield, of Lake Benton, told about "Alkaloidal Medication." Dr. E. C. Miller, of Brookings, discoursed on "Empyema." Dr. A. J. Cox, of Tyler, read a paper appropriate to the profession, and Dr. J. H. Parsons, of Brookings, took up the subject of "Mastoiditis and Its Relation to Middle Ear Diseases." The meeting was largely attended and very interesting. The society voted to have the address of the Hon. J. P. Alexander published in the Lancet, and it will appear at an early date.

WABASHA COUNTY MEDICAL SOCIETY

The thirty-fourth annual meeting of the Wabasha County Medical Society was held at Mazeppa, Minn., on Thursday, July 10. Papers were read and discussed, as follows: President's address, "Seven Years' Surgical Experience in Mazeppa," by Dr. L. E. Claydon (now of Red Wing); "Report of Three Cases of Empyema," by Dr. E. H. Bayley, of Lake City; "Treatment of Placenta Previa," by Dr. W. F. Wilson, Lake City. Upon motion the officers of the society were constituted a committee to investigate the matter of illegal practitioners operating in or near the county, and report the same to the State Examining Board.

It was voted that this society affiliate with the State Medical Society, providing it can be done in such a way that members of the county society who are residents of the county, and who wish to become members of the state society, and who pay their annual dues, shall be those reported to the state society as actual members; and that medical men in the county, or others who wish to belong to the county society but not to the state society, may be received or retained as honorary members of this society, and have all the rights and privileges of the meetings, but shall not be reported to the state society as actual members.

The committee on new members reported favorably on the names of Dr. Wm. A. Deters and Dr. Henry T. McGuigan, of Mazeppa; and they were duly elected to membership. Dr. A. E. Johnson, of Zumbrota, was made an honorary member.

Officers elected for the coming year were as follows:

President, Dr. J. F. Bond, Wabasha; vice-president, Dr. W. J. Cochrane, Lake City; secretary and treasurer, Dr. W. F. Wilson, Lake City.

It was voted to hold the next meeting at Elgin on the second Thursday in July, 1903.

W. F. Wilson, Secy.

MISCELLANY

A NEW CANCER CURE

Prof. A. Adamkiewicz, of Vienna, has published in the Berlin Klin. Wach., March 24, 1902, a new series of inoperable cases of cancer, where a perfect cure was accomplished by the hypodermic use of his cancroin. Adamkiewicz maintains the idea of the microbe origin of cancer. There was treated a case of cancer of the tongue, one of the larynx, one of the esophagus, one of the stomach and one of the breast. Another case of cancer of the breast, where four operations had previously been performed, is reported by Prof. Kugel, who used the serum under the direction of Prof. Adamkiewicz. Part of the cases came from the clinics of Nothnagel and von Eiselsberg. In no case was there any doubt about the nature of the swelling. All patients were in extremis due to pain, starvation or exhaustion. In Kugel's case half a gram of serum was injected every day. After twenty injections the treatment was discontinued for a few days and then taken up again. In the case of the cancer of the tongue chewing was impossible for three years. After eight weeks' treatment mastication was good, speech was fair and general condition excellent. The cancer of the esophagus and of the stomach yielded also very rapidly; but in the case of the carcinomatous breast the metastatic affections and that of the breast-bone were more resistent.

In all these case operation was refused by the surgeons consulted.

On application of a physician Prof. Adamkiewicz gives details of the make-up of the remedy and the direction for its use.

THE PHYSICIAN OF TO-DAY

Medicine, as a profession, has been notoriously slow in gaining the social recognition which is its just due. Up to a very recent time there still lingered in England and on the continent of Europe the remembrance of the association of barber and surgeon, and it was rare for physicians to be entertained at the tables of persons who were their patients. That a change has come is sufficiently evident from various indications, but from none more strikingly than the attitude of royalty toward physicians within the past few years. The Empress of Germany has recently conferred patents of nobility upon von Leyden, Koch and other distinguished physicians. In Bavaria, Rœntgen, the discoverer of the *x*-rays, has been made a baron. France has likewise honored her physicians in various ways, and an occasional physician is also to be found among the various royal families of Europe. England has, however, gone further than other foreign countries in recognizing the worth of the medical profession. It is said that there are forty baronets and knights in medicine in Great Britain, and Lord Lister is a peer. Sir Francis Laking and Sir Frederick Treves have been made baronets, and it is rumored that peerages may follow in the event of the king's complete recovery. It is even said that a recent suggestion of the London Lancet, that one of the boys of the Prince of Wales should be reared as a physician, has met with widespread and general approval. Not many years ago it required a certain sort of moral courage to study medicine; now it offers to a man of ambition not only a varied and honorable scientific career, but also the possibility of recognition wholly outside the professional ranks. This is as it should be.—Boston Med. and Surg. Jour.

QUININE AS A STYPTIC AND ANTISEPTIC

Marx (Centralblatt f. Chir. 1901, No. 45) states that as the result of his experiments he recommends quinine as a styptic and antiseptic. Everybody knows quinine as a specific protoplasm poison. The author states that space does not permit him to describe the experiments which proved the antiseptic powers of this drug. The styptic powers of quinine arise from the ability of its salts to agglutinate the red blood corpuscles. For practical use the best preparation is 1 or 2 per cent solution of quinine hydrochlorate, which should be applied to the bleeding surface with a gauze compress or tampon. It is needless to state that its use should be confined to cases of parenchymatous bleeding. Careful observation has failed to show any injury to tissues; in fact, no reaction of any kind was observed. The disinfecting power of quinine on infected wounds is but slight, but in aseptic wounds it absolutely stops parenchymatous bleeding and has the additional power of rendering innocuous any germs that may have been conveyed into the wound by the operator's hands—Am. Jour. of Medical Sciences.

A NEW METHOD OF PERCUSSION

The value of percussion in the examination of patients has been recognized for many years, and various methods of applying it have been devised, of which two in general principle remain, the digital and the instrumental. Instrumental percussion, in which a small hammer with a suitably padded head and an ivory shield are used, gives on the whole much better results than the other, so far as the mere character of the note sounded at each blow is concerned. There is, however, one element of vital importance which has caused it to fall into second place, compared with the digital method—it does not permit the examiner to perceive the varying degrees of resistance under the finger. This very element of resistance is most important in determining the character of the mass beneath the examining hand. J. Plesch (La Sem. Med., Apr. 23, 1902) has sought to improve the note obtained by the digital method without sacrificing this element of perception of resistance. This he has apparently succeeded in doing by the following ingenious and simple procedure: The finger of the left hand, instead of being laid flat upon the part of the body to be examined, is opened at right angles at the joint between the proximal and the middle phalanx, and the ball of the finger thus flexed is applied to the desired point, while the index and ring fingers on either side help to support the middle finger in this position. If, now, the blow be struck over the knuckle of the finger, it is transmitted to a single point of the patient's body and in a way to bring out a note almost as good as that obtained withinstruments.—Medical News.

PREVENTION OF PUERPERAL SEPSIS

R. E. Skeel (Cleve. Med. Jour.) gives the following rules for preventing puerperal infection:

1. By rendering the vulva as nearly aseptic as bathing and irrigation with bichlorid solution can make it.

2. By limiting the vaginal examinations to such as are absolutely necessary, and that in a normal case is very few.

3. By making such examinations with the aid of the sight.

4. By thorough surgical asepsis of the hands and instruments. This does not mean dipping them in a little weak carbolic or sublimate solution, but thorough scrubbing with soap and hot water not less than ten minutes, followed by immersion of the hands in 1 to 1000 sublimate for at least two minutes, and for the instruments boiling for ten minutes. In the event of recent contact with pus or other septic material the use of rubber gloves, which can be boiled, is a certain preventive of infection by the hands. In fact their routine use is very valuable to the general practitioner who is opening boils, dressing abscesses and in other ways constantly soiling his hands.

5. By insisting upon clean bedding and clothing at the time of labor, and sterile vulvar pads during the puerperium, with frequent antiseptic irrigation of the vulva.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. E. P. Hawkins, of Montrose, Minn., is building a hospital.

Dr. George Ogle, of La Crosse, Wis., has located at Madison, S. D.

Dr. F. E. Fanchiere, of St. James, Minn., will remove to Sioux City, Ia.

Dr. O. F. Melby, a graduate of Hamline, has located at Willmar, Minn.

Dr. W. E. Ball, a recent graduate of Rush, has located at Mitchell, S. D.

Dr. T. P. Martin, a graduate of Ann Arbor, has located at Grandin, N. D.

Dr. A. A. Stemsrud, of Dawson, Minn., is in New York for a special course.

Dr. Max S. Hirschfield, a recent graduate of Hamline, has located at Akeley, Minn.

Bagley, Minn., is to have a hospital, and work upon the building is being rapidly pushed.

Dr. J. W. Newlove, a graduate of the Detroit Medical College, has located at Rugby, N. D.

Dr. Geo. F. Bates, of Hillsboro, N. D., is studying in the hospitals of Boston and New York.

The large 3-story addition to Dr. Darrow's Hospital at Fargo, N. D., will soon be completed.

Dr. R. W. Clancy, a graduate of the University of Toronto, has begun practice in Williston, N. D.

Dr. H. M. Johnson, of Dawson, Minn., has returned from Baltimore, where he has been for two months' special work.

Dr. G. W. Brooks, of Kingston, Ontario, has become a partner of Dr. W. Y. Corry, of Hannah, N. D.

Dr. A. H. Dunlop, of Crookston, Minn, has been appointed local surgeon of the Great Northern Railway.

Dr. A. W. Hyde, of Brookings, S. D., who has been taking a post-graduate course in Chicago, is at home.

Work has been begun on a new hospital building at Virginia, Minn. The hospital will be managed by Dr. C. B. Lenont.

Dr. A. T. Mann, of Minneapolis, has gone to Boston to spend the summer months in the study of surgery and surgical pathology.

Dr. C. A. Butler, of Dell Rapids, S. D., has returned from Johns Hopkins, where he has been taking a post-graduate course.

Dr. C. J. Ringnell, of Minneapolis, secretary of the State Board of Medical Examiners, is in the East doing special work in surgery.

Dr. F. W. Cox, formerly of Vermillion, S. D., but for the past year a U. S. surgeon, died last month at San Francisco, from appendicitis.

Dr. O. T. Peterson, who has been studying in Europe for the past three years, has returned and resumed his practice at Northwood, N. D.

Dr. W. A. Jones, the editor of the Lancet, has gone to the Canadian mountains for a month. His famous (or infamous?) auto was left behind.

A doctor and a bank, says a local paper, are wanted in the village of Zumbro Falls, Minn. The combination is certainly suggestive, and enticing.

Dr. A. F. Groves, of Brainerd, Minn., who has been on the sick list for some time and has been in St. Paul for special treatment, is rapidly improving.

Dr. A. M. Adsit, of Hastings, Minn., has gone to Boston to take an extended special course in eye, ear, nose and throat work. The physicians of Hastings gave Dr. Adsit a farewell entertainment.

Dr. H. B. Haynes, who has been assistant house physician in St. Mary's Hospital of Chicago, has located at St. James. St. Mary's Hospital, as our readers may recall, is under the charge of Dr. Ochsner.

Dr. Alden H. Steele, a pioneer of the West, died at his home in Olympia, Wash., last month. In 1852 Dr. Steele amputated a leg at the thigh, using chloroform which was the first time it was used in the far West, outside of San Francisco.

The train-men of the Northwestern Line are to receive instruction in the rudiments of surgery, especially in the first aids to the injured and the dressing of wounds. The work of instruction will begin at once on the Iowa division of the line.

The State Board of Medical Examiners of North Dakota, issued 18 certificates at the July examination held at Fargo, July 10. Certificates were issued to the following: S. M. Ferguson, Bracket; A. M. Swenson, Maddock; J. W. Newlove, Rugby; J. C. Simpkin, Granville; H. C. Windell, Minot; V. J. Lea Rose, Bismarck; T. P. Martin, Grandin; A. E. Hillis, Bathgate; R. T. McLaren, Souris; J. R. Morrison, Donnybrook; R. W. Clancy, Wiliston; E. G. Nicholson, Manvel; F. S. Sanbourg, Balfour; M. Ivers, Christine; G. E. Chamberlain, Bismarck; T. M. McLachlin, McHenry; C. M. Pierson, Gretna, Man.; C. E. Bachman, Fingal.

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NEPHROPEXY, WITH ESPECIAL REFERENCE TO THE INDICATIONS FOR, AND THE METHOD OF, PERFORMING THE OPERATION, WITH REPORT OF ILLUSTRATIVE CASES*

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MINNEAPOLIS

Surgeons in different parts of the world have devoted years of study to find a suitable way in which a prolapsed or floating kidney, that gives trouble, may be anchored securely in a comfortable position, so that the symptoms caused by the excessive mobility would disappear, and at the same time not interfere with the healthful functions of the organ. The location and structure of the organ has made the problem a difficult one. The association of a prolapsed or floating kidney with ptosis of other contiguous abdominal organs, makes this matter still more perplexing. The positions and supports of these other organs must be considered in dealing with the renal displacements. In this paper I shall consider displacements of the right kidney only, that being the one with which we are accustomed to deal, and which is the cause for the most complaint.

True floating kidneys may be completely enveloped by the peritoneum. The fatty capsule envelopes the kidney, and may contain some muscle, as well as fibrous tissue. This membrane is loosely adherent to the fibrous capsule in the normal state. Besides enveloping the kidney it surrounds the blood-vessels and ureter, which pass into the organ. This capsule is quite redundant in some cases, especially is this noticed in prolapsed and floating kidneys.

The kidneys are held in their normal position by other forces. A deep paravertebral notch favors the retention of the kidney in its place. If these notches are cylindrical they are a factor in the malposition of the organ. The vessels and ureter are also forces, which keep the kidney high up in the body. A normal amount of perirenal fat assists in retaining the kidney in its place. The relaxed condition of the abdominal muscles or a lack of support of the pelvic floor is a factor to be considered. Ptosis of any or all of the abdominal and pelvic organs, described as Glenard's disease, increases the possibility of a prolapse or ptosis of the kidney. The body form of the individual has been considered by a few writers of recent date as an important element in the causation of misplaced kidneys. Dr. M. L. Harris, in an article read before the 1901 meeting of the American Surgical Association, considered this subject at length. He claims to be able to solve by a mathematical problem the question of floating kidney in the individual. He divides the abdomen into three zones, viz., upper, middle, and lower. A plane passed through the body level with the end of the sternum indicates the lower border of upper zone. A plane passed through the lower portion of the 10th rib marks the lower border of the middle zone. This plane also bounds the upper border of the lower zone. Dr. Harris demonstrates quite conclusively, by lateral and antero-posterior measurements, a diminished area in the middle zone in proportion to the upper zone in persons having floating kidney. This does not allow the kidney to remain in the contracted space, and therefore prolapse occurs. The formula for the index expressed by Becker and Lemhoff (Deutsche Medicinische Wochenschrift, 1898 Bd. xxiv, p. 508) is as follows:

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

Distance jugulo-symphisis divided by the least abdominal circumference and multiplied by 100 equals the index.

Any index above 77 indicates a prolapsed kidney. With one below that figure we should expect to find a kidney in the normal position. This plan has been followed out by the writer in quite a large number of cases, and in most instances the rule has held good.

The normal movements of the kidney correspond to the rise and fall of the diaphragm in the respiratory movements, and is from 2 to 4 cm. in the longitudinal direction. The degrees of abdominal mobility of the kidney may be divided, arbitrarily, into three stages (Harris):

1st. "When one half of the kidney can be felt below the 12th rib."

2nd. "When the whole of the kidney can be palpated below the 12th rib, and where the hand can be passed around the organ."

3rd. "When the kidney may be depressed to the pelvic brim, or moved beyond the line."

In this article I have used the word prolapse to define a kidney which has an abnormal mobility, excepting the form which is known as floating kidney. The former is common and acquired, the latter is congenital, according to Goelet, and has a long mesonephron. Prolapsed kidney is so common in women that many authors give the percentage as high as 25 per cent, others even higher. Goelet says 50 per cent of these suffer. Yet there is no disease that is so frequently unrecognized as this affection, and, furthermore, if discovered, a great majority of physicians are unwilling to admit that any of the symptoms present are due at all to a prolapsed kidney. "A bilious attack," "indigestion," "gall stones," "appendicitis," etc., are frequent explanatory terms used by physicians to describe the attacks of suffering. Appendicitis, colocystitis, jaundice, pyloric obstruction, etc., are possible complications of a prolapsed kidney. The primary cause of discomfort, if analyzed carefully, however, in some cases will be found to be due to a misplaced kidney.

The various symptoms and complications associated with kidney prolapse have been enumerated at length by Goelet, and so complete is the list that I have embodied it in this article.

1. "Chronic digestive disturbances, manifested by distension of intestine and irritability of stomach."
2. "Nervousness, restlessness and insomnia."
3. "Usually fatigue after standing or walking."
4. "Palpitation of the heart, vertigo, and syncope."
5. "Pain over part of stomach and part of heart."
6. "Dragging pain of loins extending down the thigh, increased by standing or walking."
7. "Inability to rest on the other side comfortably."
8. "Irritability of bladder."
9. "Jaundice."
10. "Pain over region of appendix, as in appendicitis."
11. "Pain referred to the ovarian region."
12. "Acute attacks of pain resembling renal colic."

A case may present any one of these symptoms or a number of them. With such a complexity of symptoms it is not easy to separate cause from effect, or to determine which is the most essential symptom to relieve. Of course I would not presume to say that any or all of these symptoms are due at all times to the kidney prolapse. A great many of them, even though associated with kidney prolapse, have no causal relation whatsoever. By a careful watching and recording the details of a case, I am quite certain we are able to trace the original cause of the discomfort. When a thorough trial has been made of properly fitting abdominal belts and pads, and after regulation of the diet, habits, etc., and we get no relief of symptoms, and when the kidney continues prolapsed, I am convinced the proper procedure is to operate.

If there is a general ptosis of the abdominal organs, the abdominal bandages are imperative, although some authors claim even when this is the case that the other organs will assume more of a normal position after the kidney is fastened in place. Some men go so far as to say that there is no such thing as a prolapsed kidney alone, without more or less general ptosis of all of the abdominal organs. I am quite sure that any surgeon who has observed these cases and has made careful examinations, will deny that statement. We often observe this condition in young women and girls, where a general ptosis is positively absent. Goelet says that "pads and bandages are useless, that the operation, per se, is devoid of risks and that it should be performed, and that it is a simple procedure, and is effectual." It is only a reasonable conclusion to decide to operate when these symptoms are persistently recurrent or continuous, in spite of the mechanical treatment. It is a gratifying result, too, when, after the operation, the complaint ceases, and the patient remains well, so far as the diseases dependent upon the misplacement are concerned. The operation should not be opposed by men who are either ignorant of the result obtained or who are unable and incapable of doing the operation.

The literature is full of articles by eminent surgeons who have made a special study of prolapsed kidney, and now that these men can say from experience that operations are successful, it is important that we all consider this subject with due care. We should not turn away patients with a prescription, a cholagogue, or instructions to eat less, etc. We should not fail to recognize the true cause of the complaint. and the remedy for it.

As great a number of operations has been devised for anchoring a prolapsed kidney, as there are operators. We should remember, however, certain facts, and be governed by certain principles, in our work for relief.

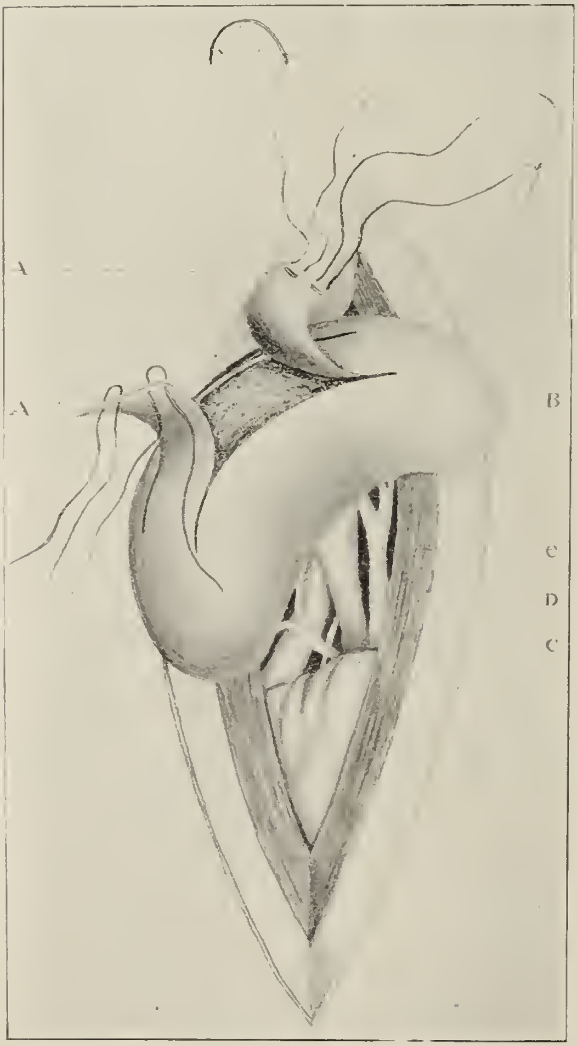
Guyon was the operator who first removed the fatty capsule and part of the fibrous capsule. Duret, Guyon, Treves, Keen, Wilcox, Hildebrand and others scratch the kidney after introducing stitches through the parenchyma. Lane, Baldwin, Morris, Selini, and Edebohls use the capsule proper to fix the kidney. Craig, A. L. Smith, R. R. Smith, Schiosso, Rice, and a few others strip the kidney capsule back, insert or pass sutures through the border or reflectral portion and through the kidney substance. Sottocosa proposes to stitch a bundle of the fibers of the quadratus lumborum muscle into a trough of kidney substance. Vulliet stitches part of the tendon of the erector spinæ under the fibrous capsule. Other men have performed similar operations, using muscle fibers or tendon structure as a support. Beyea describes, in an article in the Pennsylvania Medical Journal, May, 1902, a method of holding the kidney in place by passing two small rubber tubes on either side of the ureter, bringing them out into the center of the wound, and tying them over gauze. Senn, instead of using rubber tubes, uses iodoform strips.

These various methods are all modifications of the original. We know that cicatrical tissue often stretches so that in time the kidney may become prolapsed when held in place only by such a force. Stitches, when passed through the kidney substance and fibrous capsule, have been easily cut out. A kidney that has been prolapsed is congested and swollen, and is more likely to have this happen. I am quite convinced that many operators trace their failure to this fact. Many patients, after an operation, cough, strain, or vomit, and hence produce much force upon these stitches. It has also been demonstrated that sutures passed through the kidney substance cause atrophy of some of its structure, which is replaced by fibrous tissue.

An operation which, to my mind, is the most satisfactory, is one where the force is not all borne by these stitches alone, but has other anchorages to depend upon. It has been the tendency of some operators to fasten a kidney as high as possible. When we consider the investigations of Harris and others, which indicate that the area in which the kidney should be placed is too small for its retention, that mistake will be avoided by fastening the kidney at a lower level. It is not so much the position as the excursions of the kidney that cause trouble. If the kidney is fastened too high, it may be gradually crowded down to the lower level again.

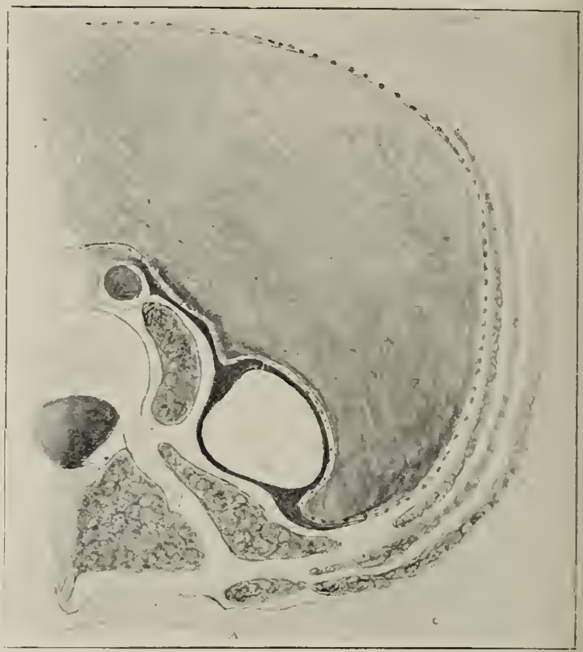
The operation which the writer has performed on a few cases of late, is only a modification of a number of others described in articles written by different operators. It consists mainly in dissecting a strip of the fibrous capsule in a longitudinal direction, making two flaps, one at either pole of the kidney. (See Drawing No. I.) When the dissection is made in this direction we shall have flaps long enough to bring up between the quadratus lumborum muscle fibers on either side of the wound, and can fasten them in that position. (See Drawing No. II.) The muscle-fiber impinging upon these flaps gives additional support, and does not permit the sutures to cut through the capsule. When the flaps are dissected in the other direction, transversely, the flaps secured are very short and are of little avail as a support, for they are not long enough to bring up between the muscle-fibers.

Drawing No. I



AA—Reflected flaps of fibrous capsule.
B—Kidney.
CC—Renal vessels.
D—Ureter.

Drawing No. II



A—Point at which incision is made down to kidney B.
C—Quadratus lumborum through which the incision is made, and where fibrous flaps are anchored.

The technique of the rest of the operation is about as described by other authors, and can be traced in the description of the operation under Case I. Other important features of the technique are as follows: A blunt dissection of the muscle, avoiding the cutting the iliohypogastric nerve, leaves a denuded portion of the kidney between the flaps which adheres to the muscle and fibrous tissue in its proximity, and forms an additional support ultimately. The gauze drain, which extends down to the kidney substance, increases the plastic exudate. All complications that are possible to be remedied, I operate upon at the same time. The soreness and tenderness in the right iliac region, which may simulate a chronic appendicitis, often disappear after the kidney has been anchored.

I have recorded below some of the cases which I have operated upon recently, according to the method described herein. While the operations which I have done previous to the adoption of this method have been fairly satisfactory, the results have not been as perfect as those obtained by this method. I have purposely reported a few cases that have not been operated upon, so as to bring out the question as regards the advisability of operation.

CASE I.—Miss L., aged 19, complained a great deal of back-ache, nervousness, and pain in the right side, below the 12th rib. Urine contained a great deal of albumen and a few casts. There was also some pus. She had suffered nearly two years as she remembered. She had general malaise, and tired easily. The pain in the hypochondriac region was severe if she exercised, walked, or stood long. She was nauseated quite frequently after eating. She had spent much of her time in bed for several months. Upon examination the right kidney was found prolapsed a little below the 2nd degree. The measurement at the smallest diameter of the waist was 23 inches, and the jugulo-symphysis (sterno-pubic) measurement was 20 inches. This gives us an index that would, according to the formula, show a floating kidney.

After treating the patient for some time with pads and bandages, and putting her on the appropriate diet and remedies for patients suffering with nephritis, with very little effect, an operation was determined upon. A few days previous to the operation the urine from the separate kidneys was secured by the use of the Harris segregator. The urine from both kidneys was found to contain albumen, although the right one was worse. The usual preparation was made for the operation. On Jan. 23, 1902, the operation was performed with the patient nearly in Sims' position and with the large sand-bag lying beneath the patient below the 12th rib, which increased the distance between the ribs and the crest of the ilium. An incision was made external to the erector spinæ muscle, continuing downward from the 12th rib for about three inches and a half. The muscle tissue was divided in the direction of its fibers. Sponge-holders were clamped on the fatty capsule, and by pressure on the abdomen the kidney was gradually worked through the wound, the fatty capsule was incised and stripped from the fibrous capsule, to which it was slightly adherent. The fatty capsule was turned back and puckered up at the lower pole of the kidney, making a pocket in which the kidney rested. The perinenal fat was stitched in this position. A portion of it was anchored in the lower angle of the wound with chromicized catgut. The opening was then made at the lower external and posterior border of the kidney through the fibrous capsule. With a small blunt instrument passed through this opening, the capsule was separated from the kidney longitudinally to the extent of three inches and laterally one and one-half inches. In this manner very little hemorrhage takes place, much less than usually occurs where this is separated and incised with the knife. An incision on either side of this stripped-up portion of the fibrous capsule, in a longitudinal direction, and a cross cut in the center, formed two separate flaps, being attached to either end of the kidney (Fig. 1). These were now stitched by chromicized catgut after the kidney was replaced in the body into the upper and lower portions of the wound, the muscles closing upon the flaps finally holding them securely. A strip of iodoform gauze was passed from the center of the wound down to the kidney substance, for drainage and to favor plastic exudation. The rest of the wound was closed by the figure-of-eight silkworm-gut sutures tied over gauze. The gauze drain was left five days, when a smaller one was introduced. This drainage was kept up for about ten days. Marked improvement seemed to be manifest in the quantity and quality of the urine. The albumen seemed to gradually decrease, and the amount of urine to increase. On Feb. 7 no albumen was found, and very little was found subsequent to that, until her discharge from the hospital, which was on Feb. 25. The urine had increased in quantity from 14 ounces to about 36 ounces in 24 hours. Since that time up to the present she has had no pain in the right side. She feels less nervous, and her appetite and digestion are better. She has not gained much in flesh, but is much improved otherwise. There is some albumen present, but not nearly so much as before the operation.

I have found that her left kidney is somewhat prolapsed at the present time, and she begins to complain of pain in that region. The right one remains fixed in the position in which it was anchored. The left kidney was not found prolapsed in examinations previous to the operation, although it may have been out of position at times other than when examined. We may possibly account for the continued presence of albumen and pain partially because of the prolapse of this kidney. I am not inclined to give the operation all the credit for the diminution of the albumen, for rest itself is of great importance, but its effect is temporary while that of the operation may be permanent. While we have not absolutely cured this patient of all her symptoms, we have given her enough relief to have warranted the operation, and to indicate greater possibilities in these cases in the future.

CASE 2.—Mrs. H., aged 37, married, one child, complained for a number of years of a dragging pain in the right side below the 12th rib, and radiating down into the right pelvis. She had been operated on for appendicitis, ovarian and tubal diseases, and lacerations. Although the appendix had been removed three years ago, a dragging pain and soreness still continued in the right iliac fossa. She was greatly troubled with obstipation. The right kidney was found at various times to become prolapsed about to the 3d degree; at other times it was found in normal position. Occasionally she would complain of severe pain in the right side; at other times she would have little pain except the soreness and dragging feeling. When the pain was most severe there seemed to be an obstruction of the ascending colon, caused by the prolapsed kidney.

An operation was determined upon, and was performed March 14, 1902. The operation was done in the same manner as in case No. 1. Drainage was left for six days. The wound healed perfectly. Examination at the present time shows the kidney to be in the position in which it was anchored. The patient has had no soreness or dragging pain since the operation, and according to her statement the pain from which she had been suffering for so many years has been relieved.

CASE 3.—Mrs. S., American, aged 33, married 14 years, weighed 123 pounds, consulted me about a pain in her right side that was almost continuous, and was especially noticeable during the last six months, but had been first observed two and a half years since. Most of the time the pain was dull in character, extended down from the region of the liver into the pelvis, and was also noticed in the region of the navel; and occasionally she felt an acute pain in the side.

Upon examination I found the right kidney prolapsed to a little beyond the second degree, and very tender. Upon pressure it would recede, but would become prolapsed again, even while the patient was in the recumbent position. There was a great deal of tenderness over the region of the appendix. She had had no acute attack of appendicitis, but undoubtedly there was inflammation in and around the appendix. An examination showed the urine negative. An operation was performed May 7, 1902, and performed as described in Case 1. An Alexander's operation was performed at the same time for a badly reflexed uterus. The fatty capsule was found firmly adherent to the fibrous capsule at the lower end. This case is of so recent date that we are unable to say what the outcome will be. The patient has had no complications since the operation, but is still in the hospital.

CASE 4.—Mrs. S., aged 35, has three children, complains of a heavy, dragging, dull pain in the right side below the 12th rib. Occasionally she has severe pain with nausea and vomiting. These attacks are similar to the Dietel's crisis, and resemble a renal colic. They are evidently due to the sudden twisting of the pedicle, causing a kinking of the renal vessels and a drawing on the renal nerves. Assuming a recumbent position, for a short time after these attacks, gives the patient relief. The extreme soreness of the kidney gradually disappears. Upon examination the right kidney is found prolapsed at times, a little below the 2nd degree. Pads, corsets and bandages are all inadequate for the relief of these attacks. This patient has not yet been operated upon.

CASE 5.—Mrs. T., aged 45, married, no children, had an attack of gastro-enteritis one year ago, but has had more or less trouble with her stomach for a number of years. She is distressed after eating, and has occasional attacks of vomiting upon rising from a recumbent position. The pain in her right side has been getting worse. She is jaundiced, sometimes more than others. According to Reid, this is probably due to the kidney drawing upon the hepaticoduodenal ligament, or, as happened in two of Wolff's cases, it might be due to the pressure on the bile-ducts. The attacks of vomiting come on suddenly, and the pain is quite severe afterward. The gastro-intestinal tract is now in good condition, and her attacks of vomiting are independent of any trouble in the stomach or intestines. She has lately had swelling of the limbs. Examination reveals the right kidney prolapsed to the 2nd degree. Pads and bandages relieve her somewhat. Upon a careful analysis of her case, I find no other reason to account for the jaundice, attacks of vomiting and pain, and perhaps the swelling of the lower extremities than the prolapsed kidney. Pressure upon the kidney in this case, as in all other cases reported, caused a great deal of pain.

The conclusions that I wish to offer are as follows:

1. A certain percentage of prolapsed kidneys causes discomfort.
2. Prolapsed kidney often produces reflex symptoms.
3. Prolapsed kidney is often associated with various complications or dependent conditions.
4. Symptoms depending upon prolapsed kidney are frequently attributed to other sources.
5. The degree of prolapse does not always determine the proportionate amount of discomfort.
6. When the symptoms present have been traced conclusively to a prolapsed kidney, and when the suffering cannot be relieved by pads or bandages, an operation should be advised.
7. The operation should be one which will anchor the kidney most securely in the position most comfortable to the patient.
8. The operation, properly performed, gives most satisfactory relief.

BIBLIOGRAPHY

Edebohls.—Australasian Edition of Annals of Surgery, Vol. XXXV, No. 2, March, 1902.

Edebohls.—Medical Record, May 4, 1901, p. 690, Vol. 59, No. 18.

Beyea.—Pennsylvania Medical Journal, May, 1902.

Habershom.—Edinburgh Medical Journal, May, 1900.

Morris.—Medical Record, Feb. 23, 1901, p. 284, Vol. 59, No. 8.

Goelet.—American Medicine, Dec. 28, 1901, Vol. 2, No. 26.

Davis Byron.—Journal American Medical Association, May 10, 1902, Vol. 37, No. 19, p. 1208.

Harris.—Journal American Medical Association, June 1, 1901, Vol. 36, p. 1527.

Marcy, Alex. J.—Journal American Medical Association, Feb. 9, 1902, Vol. 36, No. 6.

Abt.—Journal American Medical Association, April 27, 1901, Vol. 36, No. 17.

Kelley.—British Medical Journal, Feb. 1, 1902, No. 2144.

McLaren.—St. Paul Medical Journal, June, 1901.

Goelet.—Medical Record, June 1, 1901, Vol. 59, No. 22.

LEGAL MEDICINE*

By J. P. Alexander

ELKTON, S. D.

In the physical world, complexity of structure always marks evolution from a lower to a higher type. It is only through the medium of multiplicity of organs and increased intricacy of their adjustment that inert and lifeless matter is transformed into intelligent and invincible force in the muscles, nerves, and brains of men. So also, in the realm of social economy, progress is everywhere accompanied by the infinite multiplication of the essential elements of existence and the mutual interdependence of such elements, as a condition of social well-being.

As in physical nature, the lowest forms of life can exist, reproduce, and perform their simple functions with the least regard to the fitness of their surroundings, while the highest organisms are practically dependent upon the constant maintenance of suitable relations between the several organs and with external environment; just so, the nomadic savage, whom we may call a primary cell of civilization, can exist and work out his simple destiny with little regard to his fellows or their conduct, while an inhabitant of a great modern city, with all the comforts and conveniences that humanity has yet devised, is utterly dependent upon the efforts of others for food and drink, for fuel and shelter, for clothing and personal protection, and for all the thousand and one necessities of existence, to the extent that he would almost immediately perish if his connections with society were severed and he were thrown upon his own resources.

This process of differentiation, which distinguishes social as well as physical evolution, necessarily results in a constant adjustment and readjustment of reciprocal rights and duties among the members of a community.

In a state of barbarism, the predominating principle of government is physical force alone.

> "Let him take who has the power,
> And let him keep who can."

But when social conditions become more complex, and individuals no longer support life by mere personal achievements, but principally by the rendition of mutual services to one another, there must be some accurate and authoritative definition of the respective prerogatives and obligations of the members of the body politic, based upon a more or less scientific examination into the demands of justice and public utility Thus is inaugurated an era of positive law.

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In order that there may be the requisite permanence and steadiness of administration, no system of laws can be invented and put into immediate successful operation, but such system must have developed with the growth of a people and must partake of its special characteristics. Moreover, a legal system, to be effective and capable of accomplishing its true ends and purposes, should bear the impress of all the different classes and all the different shades of thought and experience which go to make up the public fabric. And this, to a greater or less extent, is bound to happen. The tiller of the soil, the artist, the artisan, the soldier, the priest, the physician, and all the other representatives of human activties must inevitably influence the character of legislation, according each to his own peculiar traits, and they will, with equal certainty, have their own characters moulded and modified, in some measure, by the operation of the laws.

The relation of the medical profession to civil jurisprudence, especially in modern times, has been extremely intimate and of the utmost importance to the welfare of society.

As civilization has emerged from the chaos of barbarism, the public health has everywhere become a subject of governmental concern. The laws of Moses relating to the clean and unclean food animals; the magnificent system of gymnasia which were provided in all the Grecian countries; the cruel ordinance which prevailed in Sparta and elsewhere, of exposing weak and deformed infants; and the crude attempts at the isolation and quarantine of contagious diseases, at various times during the Roman Empire, are examples of early health legislation. But, as the slaves and freedmen who principally represented the medical profession of Roman times and the barber-surgeons and monastic fanatics of the middle ages, as well as the charlatans and empirics of a later era, have been succeeded by a body of earnest and learned investigators, applying scientific methods and holding the honor and respect of all classes, the scope and efficiency of medical jurisprudence have been magnified a thousandfold, and it has become a most fruitful field for the exercise of activity by the lawmaker, the executive powers, and the courts. The law books are now filled with enactments and judicial decision relating to public sanitation, the quarantine of contagious diseases, the protection of the people against food adulterations, the regulation of the traffic in toxic and other substances supposed to be injurious to health, the effect of mental diseases in the enforcement of penal laws, the liability incurred in personal injury cases and death by wrongful act, the administration of public institutions for the treatment and cure of diseased persons who are a charge upon the state, and numerous kindred subjects. Besides, there is a voluminous class of legislation, probably more properly within the purview of the topic "Legal Medicine," which has for its object the protection of the public against the acts of unqualified practitioners and which provides methods for limiting the personnel of the profession to such as have the necessary training and other qualifications.

The class of subjects first referred to illustrates the effect of medical science on statecraft; the one later mentioned, the reflex influence of politics upon the profession. In both classes of subjects, the most important question to be met and solved by the lawmaker and the expounder of laws relates to the extent to which the state may beneficially interfere with individual liberty of action.

In the face of this question, the doctor's profession assumes an attitude essentially different from that of most other callings. The suitor employs a lawyer to defend a right or redress a wrong based upon a state of facts comparatively simple and well-defined to the mind of the suitor himself. The remedy applicable to that state of facts is likely to be covered by a series of precedents, more or less familiar to the public, or which may be illustrated by analogies with which the public is acquainted. Hence it is that a pretender to legal knowledge and skill has relatively slight opportunities to deceive his clientage. The same is true of numerous other occupations whose function it is to render services to others. On the other hand, while the lawyer and many other semipublic servants receive their diagnoses, so to say, practically ready-made, and their duties to employers are essentially therapeutic, the physician's first and most important care is to determine the nature of his patient's malady, not merely by the patient's statement of facts and sensations, but by exhaustive analysis of complicated conditions for which exact precedents are wholly wanting. Further, he is met at all points with blind ignorance, credulity, and prejudice upon all subjects where the practitioner might receive assistance from the person under treatment. Add to this the unavoidable panic which is apt to arise in the mind of a person who believes himself seriously ill, and induces him to submit blindly to any scheme which promises relief; and it becomes apparent that the public is justified in taking what otherwise might be considered extreme measures for its protection against incompetency in the medical profession, and that that profession is equally justified in demanding from the public, in return for the toil, hardship, and unremitting application, in the cause of suffering humanity, which alone can make its work effective, the most stringent enactments which can be enforced, with a view to preventing unqualified persons from engaging in the practice.

I am disposed to believe that such a policy meets the general approval of the people. The chief difficulty is in devising measures which are practicable in carrying the policy into effect. There are constantly arising alleged schools of medicine claiming for themselves various degrees of superiority over others previously acknowledged as standards. These may have merit, or they may be only expositors of arrant quackery; but, be this as it may, many of them have numerous adherents and advocates among the people who select the law-making powers and who have no adequate means of deciding upon the accuracy of their respective claims. For this state of things, whereby it becomes extremely difficult to establish and maintain a permanent standard of legal requirements for the profession, I can see no sufficient remedy except in the spread of popular education along physiological and hygienic lines. By that process the influence of the advocates of systems which are devoid of any excellence from a scientific standpoint, would gradually disappear.

I am disposed to think that the laws, as they now exist, could be made more efficient than at present, against the acts of an extensive class of quacks and imposters who are recognized by no following of any respectability, but who, by appealing to credulity and superstitition, are a pregnant cause of suffering and death among the people. It would seem to be the especial duty of reputable practitioners, to whom knowledge of the acts of these persons is apt to come, to call the attention of the authorities, including health boards and prosecuting officers, to such violations of the law. I also respectfully suggest that the regulations relating to the licensing of physicians and surgeons, particularly as the same exist in this state, might be advantageously amended by broadening the requirements of candidates in general literary and scientific knowledge, and, perhaps, by providing a more careful scrutiny into their professional attainments.

The last legislature of this state enacted a law forbidding the admission of any person to the bar except upon an actual appearance of such person before the Supreme Court, and the furnishing by such person of proof satisfactory to the court, not only of his legal attainments and moral character, but also that he has sufficient general education to successfully perform the duties of his profession. For these purposes no certificate of graduation, or of admission to practice in other states or countries, is held to be sufficient, but the court must be satisfied upon these points, either by actual examination or by other competent evidence.

For reasons before stated, it would appear that the requirements for admission to the medical profession ought to be, at least, as stringent and severe, and the proficiency of candidates as carefully scrutinized, as in that of the law, which, I apprehend, is not at present always the fact.

Before leaving this branch of the subject, I wish to call attention to a matter which is usually considered pertinent rather to the ethics than to the law of the profession. I allude to the subject of professional advertising, upon which there has been much controversy. There can be no more moral turpitude in the act of a doctor honestly proclaiming the merits of the services which he is able to render to the public than of a butcher or a baker or a lawyer. But a great majority of reputable practitioners reprobate the custom as at least a violation of professional etiquette, and abstain from it wholly. This leaves a very profitable field to unscrupulous adventurers who are wont to proclaim, in the public press, an endowment of gifts and powers which would bring a blush to the cheek of Esculapius himself on his high throne among the major gods. The claims of these persons appear to be believed by the gullible public in proportion to their magnitude and improbability, to the great detriment of the public health. It is suggested that this evil might be remedied, and the advertising controversy forever silenced by a law requiring each physician who desired to advertise his peculiar merits to submit a copy of his advertisement to the examining boards or some other designated authority, together with competent proof of all statements therein contained, and that he be allowed to publish the same only upon license duly issued by such boards or authorities.

Along the line where your profession comes into close contact with governmental functions, including measures for the preservation of the public health, as in sanitary reforms, measures for the control of contagious and infectious diseases, the establishment and management of hospitals, etc., it is believed that the attitude of the medical profession is generally wholesome and intelligent and that its motives are pure and imbued with a spirit of Christian charity. Where these measures have proved inefficient and where incapacity or corruption has prevailed in the administration of these public trusts, the defect will usually be found to have had its source in the constitution of the movement or institution, for which the law-making power is responsible, or else in a spirit of partisanship or sectarianism in the management, while the voice of the profession will be found to have been almost uniformly raised for the reform of such abuses. In my opinion, it is only by a continuance of that attitude on the part of the medical profession accompanied by a total divorcement of these enterprises and institutions from party politics that these most noble movements of modern times which truly "bring healing in their wings" to suffering millions can be made to fully accomplish their beneficient mission.

The quarantine regulations of this state, as many of you gentlemen are doubtless better aware than myself from the experience of the past few years, are in an imperfect condition, and should receive the early attention of our legislative bodies. My professional duties have particularly brought to my notice, in the matter of these regulations, a tendency to a conflict of authority between local and central officers which has sometimes resulted in the spread of disease as well as unnecessary distress to the sick. It would seem that associations like this, the daily occupations of whose members bring them into constant contact with conditions which illustrate defects similar to those last mentioned, should formulate recommendations looking to their abolition or betterment, and bring such recommendations to the attention of the proper officials, where they would, no doubt, receive consideration commensurate with the dignity of the respectable bodies from which they emanated, and the public receive benefit accordingly.

I thank you very much for the honor which you have shown my profession and myself, as a humble member thereof, by inviting us to participate in your discussions here to-day. And while I probably have not added anything of value to your deliberations, from a scientific standpoint, I may have recalled your attention to the existence of that broad ground in which the physician and the legalist have common interests. I hope, at least, that what has been said may have some slight influence in keeping alive the old spirit of mutual sympathy and respect of two professions which owe much to social institutions and which have occupied no mean place in producing the improved social conditions of our day.

CAUSES OF PUERPERAL INFECTION

Among the North American Indians puerperal infections are rare—in spite of their filth—chiefly because the fingers are never introduced into the vagina. There can be little doubt that repeated vaginal examinations, attempts to hasten labor by (unclean) digital dilation of the os, rupture of the membranes, etc., are the cause of a large proportion of puerperal infections. Normal labor is a physiological, not a pathological, process. Too much interference with nature's plan breeds mischief. One, or at most two, vaginal examinations should suffice. Instrumental or even digital efforts to hasten labor should be resorted to only on definite indications; and then with all surgical precautions.—Dr. Lanphear, St. Louis.

REPORT OF TWO CASES OF ECTOPIC PREGNANCY WITH DISCUSSION OF THE DIAGNOSIS AND THE TIME TO OPERATE*

By George E. Barton, M. D.

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MINNEAPOLIS

I was called on April 23, 1901, about 6 p. m., to see Mrs. R——, a little English woman 34 years old. She was suffering intensely with pain in the abdomen, but did not show any marked anemic appearance, and as I had never seen the patient before, I did not know but what the pallor shown was due to the shock produced by the pain. I found considerable difficulty in getting a history of the case, but finally secured the following: She had eaten a very hearty meal of pork and boiled cabbage about noon, and at about two she was getting ready to go down town, when she suddenly felt a desire to have her bowels move. She went to the closet, and was taken with such severe pain she grew faint, and sank down upon the floor. This was about 2 p. m., and I was called at 6 p. m. I learned, together with the above facts, that she was 34 years old, and had three children, the youngest being five years old. Between the last confinement and the present time she has had two miscarriages. She missed her menstrual period four weeks ago; but had had a slight show to-day. Her pulse was rapid and weak, temperature 100°, abdomen tender and somewhat distended. She was nauseated, but had not vomited. She was given a hypodermic of ¼ gr. morphia, and morphia was ordered as needed for pain. I was not called during the night, but saw her early in the morning, when I found her much easier. She was considerably distended and tender over the abdomen, and referred the point of greatest pain and tenderness to the left side about on a level with the crest of the ilium. Her temperature was 101°, and pulse considerably over 100. She was having what was apparently a scanty menstruation. On making a vaginal examination the uterus seemed a little larger and softer than usual. Outside of that, owing to the great amount of abdominal tenderness, I could tell little or nothing. I believed it to be a case of ectopic pregnancy, but did not feel certain of my diagnosis. I called Dr. Sweetser in council, and after going over the case pretty carefully we decided there was at least enough in her condition to cause doubt as to the diagnosis. I sent her to the hospital the next day, applied turpentine stupes, got the bowels open, and in a couple of days the tenderness had disappeared, so that we could make an examination. We found a mass on the left side of the uterus. The woman had suffered from a bronchorrhea for a number of years, and this now seemed to be made worse, so that while we were positive of our diagnosis we feared to give her an anesthetic.

We kept her at the hospital until the morning of May 7th before operating. On April 28th she expelled almost a complete cast of the uterus which, with dysuria completed the clinical picture. On May 6th she again had some pain so that we were convinced that longer delay was dangerous. On the morning of May 7th, she was taken to the operating-room, given chloroform, and with the assistance of Dr. Sweetser and the internes of St. Barnabas Hospital, the abdomen was opened. The pelvis was found full of clotted blood with considerable adhesions, but none very firm. We also found the unruptured sac of an ectopic pregnancy in the fimbriated extremity of the left-tube; and the ovary, tube, and clots united by adhesions. The mass was removed without rupturing the sac. The clots were then removed as rapidly as possible, the pelvis washed out with normal salt solution, and the abdomen closed. She stood the operation well, and was put to bed in good condition; pulse 100, respiration 24. The next morning the pulse was 120, temperature 101°, and respiration 40. In the evening she became quite cyanosed; the lungs were very full of râles, and there was beginning consolidation of the base of both lungs. On the 9th the respiration was 48 and pulse 132. On the 10th the pulse reached 140, temperature 103.2°, and respiration 48. From that day on she gradually improved though with a few bad indications; for instance, on the 20th from normal her temperature suddenly shot up to 102.6°, pulse 132, respiration 40; but it was normal on the morning of the 21st. The lung difficulty was treated with ammon. carb., digitalis, belladonna and strychnia, five gr. Dover's powder at bed time and divided doses of calomel for the bowels. The stitches were removed the eighth day. So far as the abdomen was concerned the patient had no unfavorable symptoms after operation. She made a good recovery and was up and about in four weeks after the operation.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

On March 4, 1902, I was called by Dr. Poehler to see in council with him Mrs. F——. The doctor gave me the following history: She was 35 years old; had had six children, the youngest child being two years old; no miscarriages; no trouble at any of her confinements, and never had any pelvic trouble of any kind, except that for the past six months she had leucorrhea, but had never consulted a physician with regard to it. She had missed one menstrual period, and believed herself normally pregnant. This was just about the time for her second menstruation. Eight days prior to my being called she was taken with pain, and vomited after eating quite freely of some pears. She also grew quite faint. Dr. Poehler was called, and found the patient quite weak with a rapid, weak pulse and considerable pain and tenderness over the abdomen. He gave her an anodyne, and kept her in bed. The trouble soon passed, and in two or three days she was up and about. She referred the pain to the median line. Until this time she had felt the same as at any previous pregnancy. On the following Sunday, just one week from her first attack, her husband came to the doctor for some more medicine, as his wife was not feeling quite so well. That night the doctor was called, and in the morning he summoned me. I saw a pale woman, with pulse 110, considerably prostrated and temperature a little above normal. She was comparatively comfortable, although she had considerable tenderness over the abdomen. A digital examination revealed a retroflexed uterus, a little enlarged, and softened, the body of the uterus being very tender. Outside of this I could feel nothing abnormal. The woman thought she was threatened with a miscarriage. We decided the strong probability was that we were dealing with a case of ectopic pregnancy, and so told the husband, and advised the immediate removal of the patient to St. Barnabas Hospital, where we could carefully watch her; and she was taken there that day. She was given a laxative, and turpentine stupes were applied to relieve the tenderness. The next day she was taken to the dressing-room and examined. We could feel nothing but the body of a retroflexed uterus, which was very tender to the touch, and a sort of crepitation, which was quite distinct on bimanual examination. We could not feel a mass on either side of the uterus, so that, when we were through with the examination, we felt that it was possible we might be wrong in our diagnosis, and it still might be a normal pregnancy in a retroflexed uterus. Until this time there had been no flow whatever, and at no time during her sickness had she had the severe pain usually seen in these cases. Tuesday night,—the night following the examination,—she again had an attack of faintness and some pain; flowed some; and a uterine cast was expelled, which we did not learn until Wednesday noon, when we at once went to the hospital where we found her pulseless, in extreme pallor, terribly nauseated, and vomiting. We gave her morphia, atropin, and strychnia; also a hypodermoclysis of eight ounces of normal salt solution under each breast. She soon began to rally, and continued to improve. We kept her slightly under the influence of morphia until the next morning at 8 o'clock, when she was in fairly good condition. She was given an anesthetic by Dr. Stout, and assisted by Drs. Sweetser, Dart and Poehler, I quickly opened the abdomen, and found it full of liquid blood. I made an opening into which I could put my whole hand, and reaching down behind the retroflexed uterus and feeling out to the right, I at once found the mass attached to the lateral wall of the pelvis by adhesions, which gave way readily, and the mass was delivered, the pedicle tied with catgut, and cut off external to the ovary, the pregnancy being in the fimbriated extremity of the right tube. The operation was completed by thoroughly washing out the abdomen with normal salt solution, and leaving the pelvis full of the solution. The abdomen was then closed with catgut for the peritoneum and with silk-worm gut through the muscle, fat, and skin. The thica of the muscle was brought together with continuous catgut before tying the silk-worm gut. The operation lasted 30 minutes. Before the patient was removed from the table she was given an enema of 30 grs. carb. of ammonia, three ounces of brandy, and three eggs in eight ounces of normal salt solution. She was put to bed in good condition. Her convalescence was uninterrupted by a single unfavorable symptom, except that on the day after the operation her temperature rose to 102°, but without a corresponding rise in the pulse-rate. She left the hospital two weeks after the operation, but was required to stay in bed one week longer.

This patient, I am confident, would have died, had I attempted the operation during collapse. The specimen showed almost a round opening through which the fetus had escaped, but the fetus itself was not found.

Both these patients thought they were normally pregnant and neither had any symptoms different from any preceding pregnancy, and neither gave any history of having had any pelvic trouble, except that Mrs. F—— had leucorrhea for some six months prior to this trouble.

The diagnosis of early ectopic pregnancy involves the diagnosis before rupture, and the diagnosis after rupture. The symptoms before rupture—for instance during the first two months of prengancy—are those of normal pregnancy with, as in the two cases reported, no other symptoms until rupture takes place, or at least partial rupture.

If any other symptoms develop during the first two months, pain will be one of them. Pain will often be complained of in the region of the ovaries in the early months of normal pregnancy. A little flow may appear, and continue constantly from very early pregnancy. This also may be true in normal pregnancy during a threatened abortion. Both pain and flow being found in other conditions is not diagnostic of ectopic pregnancy. The presence of one or both of these symptoms, however, together with the ordinary symptoms of pregnancy, may cause the patient to seek advice when the physician, on making an examination, finds an enlarged and softened uterus, the physical indications of normal pregnancy, but nothing else, for during the first six or eight weeks of tubal pregnancy the mass is so small that in a patient with a thick-walled abdomen, it may not be found.

Suppose, however, you do find a mass with all the other symptoms of pregnancy. There are other conditions of the tubes and ovaries which will give rise to a mass, which may never have been discovered until the woman has been examined, because of symptoms produced in the mass by a normal pregnancy.

I know of no symptoms upon which a positive diagnosis of early unruptured tubal pregnancy can be made. I think, however, the presumption may be strong enough to justify one in operating, because the mass will probably be one that should be removed. To substantiate my position I want to quote from a few well-known men.

Joseph Price says: "The diagnosis before rupture is rarely made and when it is made it is of necessity not positive, because the same set of symptoms may arise from a number of pathological conditions; for example, a retroflexed gravid uterus, an ovarian cyst, a uterine fibroid and hematosalpinx have all been mistaken for tubal pregnancy; moreover, the physician rarely sees such cases until rupture has taken place."

Dr. Baldy of Philadelphia, says: "The diagnosis before rupture I consider beyond the reach of man, and I never expect to see the time when it can be made with certainty and accuracy."

Tait stated that while it may be held and proven by operation that ectopic gestation has existed, still in other cases where the diagnosis is just as positive with just as strong presumptive evidence, an error in diagnosis will be found to have been made and no ectopic pregnancy exists.

Dr. Howard Kelly says: "Although the diagnosis in an unruptured case may sometimes be easy, mistakes may also occur especially when the patient is seen but once."

Rupture of an ectopic gestation may be suspected when the patient offers a history of having failed to see her sickness for one or two periods, and the other ordinary symptoms of pregnancy associated with more or less discomfort on one side; a sudden attack of violent tearing pain, followed by syncope; symptoms of internal hemorrhage; and a state of collapse. "A physical examination affords but little information, as, unless the tumor is sufficiently large to cause a sensation of resistance upon one side, the physical signs are indefinite." (Montgomery). Rupture is simulated by lesions of the abdominal viscera, such as perforating ulcers in the stomach, duodenum, small intestine, and vermiform appendix, rupture of a pyosalpinx; torsion of the pedicle of a small ovarian cyst; acute intestinal obstruction; renal and biliary colic, and, I will add, the severe pain and collapse occurring in an acute ileocolitis. If, however, the above symptoms are followed by a rise of temperature, tenderness over the lower abdomen, with dysuria, constipation, and the expulsion of a more or less complete cast of the uterus, the diagnosis can be made positively; for this forms a group of symptoms not found in any other condition.

When the surgeon sees a case of ruptured ectopic pregnancy, and has made his diagnosis, the question to be decided is whether the best interests of the patient will be conserved by operating immediately or by waiting until the patient rallies. My judgment is on the side of those who wait. Those of the opposite view say the indication is to stop the hemorrhage at once by operating. Yet the history of the cases shows that the majority of them do rally, and when they rally then they are in condition to stand the shock of the operation, and they recover; while, if operated upon in profound shock, the majority of them die.

I remember that while attending the clinics of Dr. Joseph Price, he refused to operate on a case in collapse. He said the patient would rally, and she did. Dr. J. W. Elliot, of Boston, in the Medical Record, reports twenty cases in all of which he waited, and all recovered. In the Massachusetts General Hospital for the past five years seventy-five cases have been operated upon with three deaths, and the three that died were all operated upon immediately after admission, and all were in a more or less collapsed state.

These, with numerous other reports, it seems to me, show very decidedly the advantage of waiting.

THE MEDICAL TREATMENT OF PULMONARY CAVITIES

Does healing ever take place in large pulmonary cavities in cases of tuberculosis? Unquestionably, yes. Is it to be expected in a fair proportion of cases? Yes and no. Under favorable hygienic conditions, healing is more likely to occur than under the environment of the ordinary dispensary patient. Yet healing has been observed even in such cases, provided the patient was still able to walk several miles daily and could be induced to obtain an occupation keeping him in the open air. It may be of interest to mention the varied measures that have seemed to influence favorably the healing of cavities—that is to say, under which dry cavernous breathing has taken the place of liquid râles as an auscultation phenomenon; percussion tympany or hyperresonance, or cracked pot remaining unchanged, or diminished but slightly.

First is the overlauded and overabused Bergeon enema of carbonic acid and hydrogen sulphide. There can be no question of its efficacy when used persistently and intelligently. It is troublesome,, but its failure to revive the dead, or to do more than is here claimed for it, furnishes no good reason for abandoning it.

Second is the application of flying blisters over the chest in the area of cavernous signs The blisters should not be much larger than one inch square; only one should be applied at a time; and it is usually best to allow healing to take place in one spot before the next is blistered. Thus from one to three blisters will be applied weekly, according to circumstances. Persistence in this plan for many months, perhaps for a year, is necessary to the accomplishment of results.

Third is the administration of creosote and its compounds and congeners, of which creosote carbonate seems to be the most effective, simply because it can be given in very large doses without producing gastric irritation, toxic symptoms or nephritis. Whatever creosote preparation is employed it should be given up to the maximum dose tolerated. About four drams daily of creosote carbonate can be given to some patients; much less must suffice with others. Beechwood creosote is much cheaper than the carbonate, but can rarely be tolerated for long periods in doses of more than 10 minims thrice daily, and some patients cannot bear 5 minims. It is best given in milk or in oil. Sometimes it can be given in comparatively large doses by the rectum, suspended in milk or oil; but even if gastric irritation is thus avoided, the urine may become discolored, the kidneys and bladder irritated. This is less likely to happen with the better grade of creosote, which term applies to the preparations of two, possibly of three manufacturers. The creosote dispensed by many druggists when the name of one of these manufacturers is not specified, contains irritating by-products. Here, too. it is a question of expense. Some lay managers of dispensaries purchase drugs by contract from the lowest bidder. This is considered good "business policy" and the physician who objects to it is stigmatized as a "crank" and a "kicker." It saves dollars but it costs lives. Such a policy is especially objectionable in the case of a drug like creosote, which must be given in large doses and for many months continuously to produce good effects, and of which even the best preparations are tolerated with difficulty.

Fourth is to be ranked the internal use of sodium sulphur compounds—of which the ichthyolate is most convenient in the maximum dose tolerated. This measure is a relatively inefficient substitute for the Bergeon injections.

Any or all of these measures will often fail; in a gratifying minority of cases, even among the poor, intelligent persistence in their use will apparently bring to an end the activity of the liquefaction processes that have been superadded to the lesions and toxemia due to the bacillus tuberculosis.—American Medicine.

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MASSAGE AND SWEDISH MOVEMENT

The happy comments of Dr. Lind in a recent issue of the Lancet (July 15) upon Massage and Swedish Movement as a form of therapy, prompts us to recur to the subject in its local relations.

That mechanical therapy is gaining a wider popularity in the medical profession there can be no doubt. The increasing size of the chapter devoted to the topic in the more recent works on therapeutics is an item of evidence to this fact. The numerous special books and the frequent papers in current medical literature on the subject, are another. The interest shown in medical educational circles by the answers of the deans of medical schools to the questions propounded by Dr. Turck, and set forth by him in the Journal of the American Medical Association (Sept. 21, 1899), also serves to show an awakening upon this subject. That the laity welcome it the temporary success of osteopathy would seem to prove.

Knowledge of the real nature of disease naturally leads to lessened confidence in its mere drug treatment, and, consequently, to a warmer welcome to other and additional methods of cure. Is it not well, then, that the profession should show a lively interest in the spread of a proper appreciation of this method of therapy, and, what is more important, take a part in the instruction of those who are to execute it, and carry out the physician's orders?

Among the people where the system has received its greatest development, a proper training for its application is recognized as indispensable, and is rigidly required. Like the pharmacist and the trained nurse, the masseur receives both theoretical and practical instruction in his profession, running through a course of three years' study. This makes a respectable calling in which one may obtain as good a living as in any other well-defined pursuit.

Has the time not arrived when the medical men in our city should take hold of this department of instruction, and see to it that respectable women and men are afforded facilities for mastering in dispensary and hospital the principles and practice of a valuable branch of our art, and not leave it longer to chance to develop "rubbers," or to a course comparable perhaps to a medical course of a century ago to grow a full-fledged rival healer, as in osteopathy?

C. H. HUNTER.

EXPERT MEDICAL TESTIMONY

So much has been said and written upon this topic condemning and villifying the medical expert that it may not be amiss to call attention to the fact that there are two sides to this question.

In the June number of Merck's Archives appeared an editorial which is a very good example of the unwarranted and unjust criticism heaped upon the medical expert. It begins with the following wail: "We all admit with grief and sorrow that the medical profession in this country does not enjoy the respect and confidence that it should." This is a truism that might be applied to any profession, but that it has any special application to the medical profession we deny most emphatically. The editor may speak for his professional brethren in New York, but our personal knowledge of that body of noble men, and the respect and esteem they enjoy, leads us to differ with him. We can state for the city of Minneapolis, without fear of contradiction, that within her borders there is no class of men held in higher esteem than those of the medical profession. There are those who rail against the doctor in this community, but they are usually those who owe him money, and would avoid paying him.

This editor says that because medical experts differ, the inference is that either they know nothing or that at least one of them is a perjurer. Why should this inference be drawn concerning medical witnesses any more than concerning any other class of witnesses? Why should doctors be denied the plea of human fallibility? Instead of being calumniated for not always thinking and believing alike they should have unusual license, because they have life, death, health, disease, and many other things to deal with that are beyond the power of human beings to fully comprehend. Doctors are only human beings, and are practising a science that cannot, in the nature of things, be an exact science. They should be judged by human standards as other men are, and they should be given credit for doing the best they can under their light. When they claim infallibility there will be time enough to judge them by angelic standards.

If our clerical or legal brethren were compelled to believe and testify alike or be discredited, they would be in a sorry plight, indeed.

The previously mentioned editorial quotes from a speech made by Judge Woodworth, of the Appellate Division of the Supreme Court of New York, at the annual dinner of the Society of Medical Jurisprudence in which "he lashed those experts unmercifully," as follows:

"Any witness who takes the stand and testifies on a subject not clear to the lay mind, and does not tell the whole truth and the exact truth, is a perjurer before God."

"A man who for a fee testifies in the interest of the particular side on which he is retained is no longer worthy to be received in decent society."

"When judges see certain experts repeatedly appearing in cases with the same lawyer it is difficult to tell how much weight their testimony should be given. Men of high character who give the courts the result of years of investigation and experience are entitled to all respect, but men who may be retained on either side for a fee are of all people the most to be despised."

This honorable judge should consult an expert oculist, for he has a very large beam in his eye. Every physician or surgeon who has been in court as an expert will admit that he has seldom told the whole truth, *because the presiding judge would not allow him to.* He feels, therefore, that if anyone has violated his oath it is the judge who by failure to use the power placed in the hands of every judge, prevents him from telling the whole truth; for the judge allows the lawyer to ask hypothetical questions made up of that part of the testimony which has a favorable bearing upon his side of the case, carefully omitting the unfavorable portions, and then compels the witness to answer *yes* or *no*. The judge knows as well as the witness that the question does not bring out the whole truth. The judge is all powerful; the witness is helpless, being even denied the privilege of refusing to answer. We ask in the name of justice who is at fault, the judge or the witness? Shame on the judge who will compel a witness to tell only half truths, and then call him a perjurer for not telling the whole truth.

We presume from what Judge Woodworth said that he believes that when a witness receives an expert fee he is necessarily testifying falsely. We can only infer that the judge would have us testify without compensation to insure our veracity. Virtue then surely would be its own reward. We recommend the judge to serve a year without salary, and then tell us how it affects his veracity.

Judge Woodworth objects to an expert appearing repeatedly with the same lawyer, and concludes that under such circumstances the witness is discredited. Why should the witness be discredited any more than the attorney who appears repeatedly for the same corporation. This judge does not seem to know that corporations employ medical witnesses to tell the truth, and that the corporations settle many cases out of court because their medical experts have told them that their testimony would be against them.

We all know that in every community there are men who can be hired to testify to anything, but we fail to see why the medical profession should bear the onus of this condition alone. As a class they are high-minded men, and furnish a very small percentage of those who are for sale. It is eminently unjust and unfair to take the lowest type of medical witness, and hold him up as an example of the whole profession, as Judge Woodworth did. No one despises this kind of witness more than the medical profession. In every community he is known, despised, and discredited alike by judges and medical men.

The editor whose article we have taken as a text for this editorial suggests as a protection against incompetent and dishonest experts that a commission of experts be appointed by the state to serve in all cases requiring a medical expert. This remedy would be infinitely worse than the disease, because it would provide a commission of doctors with a political pull; and it is a notorious fact that the doctor who is a politician is seldom a man of high professional standing.

James E. Moore.

THE STATE FAIR

The managers of the Minnesota State Fair accomplished a very great and a very important task when they placed the annual exhibition of the state's natural wealth ahead of all similar exhibits made in the forty-five states of the Union. The value to the state of such work is simply inestimable, and it is a revelation to many well-informed men in our state that the Fair holds this position. All honor, then, we say, to these men; and, what is more important, let us give them all the support in our power to give.

From Sept. 1 to Sept. 6 one may visit the grounds of the coming Fair, and every day see something of interest, and many things of which he may feel proud. As a state we are just beginning to appreciate our great natural resources, and though we may soon destroy our last stick of timber, our rapid growth will receive no check, for the soil that thus comes under the husbandman's hands has untold riches in its fertility. Go to the Fair grounds next month with open eyes, and you will discover the truth of this statement.

The cattle exhibit at this Fair will be the greatest, we are told, ever made in the world; and this exhibit will do much to increase cattle raising and feeding in Minnesota. The state is now foremost among the greatest in mineral wealth, in wheat production, and in dairying. Add to these the cattle and sheep industries, and the state's wealth will be largely increased, and the diversity of industries thus obtained will be very important.

BOOK NOTICES

The Four Epochs in Woman's Life: A Study in Hygiene. By Anna M. Galbraith, M. D., Author of "Hygiene and Physical Culture for Women"; Fellow of the New York Academy of Medicine; Ex-President of the Alumnæ Association, Woman's Medical College of Pennsylvania; Attending Physician, Neurological Department, New York Orthopedic Hospital and Dispensary. With an Introductory Note by John H. Musser, M. D., Professor Clinical Medicine, University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company.

This book of 200 pages is full of good suggestions for the maiden and wife. The first epoch, maidenhood, contains chapters on puberty, anatomy of the female organs, physiology, anomalies of menstruation, and the marriage question. The three remaining epochs—marriage, maternity and the menopause—deal with the ethics of married life, sexual instinct in women, sterility, pregnancy, the lying-in, the new-born infant, and the menopause, with hints for home treatment.

The book is elementary, and of no special value to medical men or women unless they are deficient in their early or preliminary education. However, if one were to follow faithfully the advice laid down, there would be no scandals, unhappiness, venereal diseases, or work for the surgeon gynecologist.

Minor Surgery and Bandaging. New (5th) edition, thoroughly revised. A Manual of Minor Surgery and Bandaging. By Henry R. Wharton, M. D., Professor of Clinical Surgery in the Woman's Medical College, Surgeon to the Presbyterian Hospital, Philadelphia, etc. In one 12mo volume of 612 pages, with 509 illustrations, many of which are photographic. Cloth, $3.00, net. Philadelphia and New York: Lea Brothers & Co.

This is a work which is very valuable to surgeons, as well as to students, for ready reference. It gives concise descriptions of various bandages, surgical dressings, and minor surgical procedures. It is a work that is up to date in all branches of surgery which it takes up.

The article on bandages, fractures, and dislocations is fully illustrated with photographic cuts. The balance of the work is also amply illustrated.

"Surgical Bacteriology" is considered in a special chapter.

Preparation and application of aseptic and antiseptic dressings is quite fully discussed.

Tracheotomy, intubation of the larynx, intestinal anastomosis, ligation of arteries, and amputations, although not belonging to the field of minor surgery, are also considered in a brief manner to adapt the work especially to the student's requirements.

A very valuable addition to previous editions, is the discussion and illustrations of operations on the cadaver.

The author is to be commended in keeping this work abreast of the times, and its popularity is made manifest by the call for this fifth edition.

A. E. BENJAMIN.

MANUAL OF CHILDBED NURSING. With Notes on Infant Feeding. By Charles Jewett, A. M., M. D., Sc. D. Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition. Revised and Enlarged. New York: E. B. Treat & Company. 1902.

Directions intended primarily for the nurse are of importance to the physician since he must often give the directions himself. This little book tells the young man all that he need say to the nurse and tells it plainly and briefly. Even the experienced obstetrician will get useful hints from its pages. The book includes all the directions that would be needed in any case and consequently some that must be omitted frequently. What may be omitted, experience and common sense will show.

WM. DAVIS.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. A. J. Black has located at Hudson, S. D.

Dr. H. J. G. Koobs has located in Scotland, S. D.

Dr. H. J. Morrill has located in Delamare, N. D.

Dr. Z. T. Holtsclow, of Iowa, has located at Salem, S. D.

Dr. G. W. Dahlquist, of Cokato, Minn., has removed to Willow City, N. D.

Dr. H. G. Blanchard, of Waseca, Minn., was married last month.

Dr. G. I. Kheiralla, of Chicago, has located at Lake Preston, S. D.

Dr. H. T. Aldrich, of Beaver Falls, Minn., has moved to Seaforth, Minn.

Dr. Frank C. Todd has gone to the north shore of Lake Superior for an outing.

Dr. W. B. Coyle, of Lakota, N. D., has resumed practice after an extended illness.

Dr. T. W. Hovorka, a recent graduate of Hamline, has located at Silver Lake, Minn.

Dr. Edward Seguin has given up practice at Royalton, Minn., and is located at Buckman.

Dr. Alva Holmes has located in Verdon, S. D., and become associated with Dr. Miller, of that place.

Dr. Oscar Fliesburg has returned to Minneapolis after practicing several years at North Branch, Minn.

Dr. L. W. Armstrong, late resident physician in University Hospital, Baltimore, has located at Minto, N. D.

Dr. E. A. Woods, of Clear Lake, will locate in Litchfield, Minn. Dr. Woods is a graduate of the State University.

Dr. E. D. Strong, who has been connected with the Garfield Sanitarium of Chicago, has located at Verndon, S. D.

Dr. Per Oyen, of Clarissa, Minn., has removed to Dakota, where he formerly practiced. He is now located at Kindred in that state.

The Northwestern Hospital, of Minneapolis, has been closed for several weeks that extensive repairs might be made on the building.

Dr. R. Hetlestater, of Canton, S. D., has returned from Chicago, where he has been taking a special course in bacteriology and microscopy.

Dr. F. O. Peterson, formerly of Northwood, N. D., has located in Grand Forks. Dr. Peterson has been studying abroad for the past three years.

The General Hospital of Alexandria, Minn., will be known hereafter as the Lake Winona Sanitorium. Many improvements have been made in the building.

A company of Wisconsin physicians propose to establish a "Health Park" in Wisconsin in the pine timber region about Tomahawk, for the treatment of tubercular patients.

Dr. P. E. Sheppard, of Hutchinson, Minn., will start next month for a trip around the world. He will be absent about a year and will spend several months in special study in Vienna.

Dr. Terry J. Hutton, one of the pioneer physicans of Minneapolis, died last month at Fergus Falls. Dr. Hutton had been out of the state a number of years, and only recently returned.

Dr. Wm. H. Rumpf, of Chicago, has located in Faribault, Minn., the change of location being made because of the educational advantages of Faribault. Dr. Rumpf has just returned from an extended European trip, where he went for study.

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REPORT OF SOME RATHER INFREQUENT CASES OCCURRING IN AN OBSTETRIC PRACTICE

By Frederick Leavitt, M. D.

Clinical Instructor in Obstetrics, University of Minnesota

ST. PAUL

DELIVERY AFTER DEATH

It was impossible to obtain a full history of the patient, either past or present. She was brought to the hospital in a moribund condition. It was ascertained from relatives, however, that she had been in labor more than twenty-four hours, and that she had borne other children. Physically she appeared exceptionally strong, while the pelvic dimensions were immense; the external anteroposterior diameter measuring nearly 30 cm. The fetus was found lying transversely, and for a few minutes we deliberated whether anything should be done or not, as the patient was evidently dying. Concluding to make a final effort to deliver the child, hypodermic stimulation was given, the hand passed into the uterus, and version performed. Great difficulty was encountered with the arms, which were extended above the head. All signs of life were soon extinct, both of the mother and child. That the operation be completed seemed imperative. So by means of a blunt hook the arms were drawn down, and the after-coming head delivered with forceps—much easier said than done.

Besides having an unusually large head, the fetus had a mid-dorsal spina bifida the size of a large Florida orange. Otherwise it was well developed, weighing 11½ lbs. The death of the patient was probably due to extreme exhaustion from prolonged and violent labor. (Before coming to the hospital she was attended by a midwife, and later by physicians who made repeated efforts to deliver.) The fetus perished, doubtless, before the mother, and its delivery was finally undertaken with very little hope of saving its life. (Photograph is shown on the next page.)

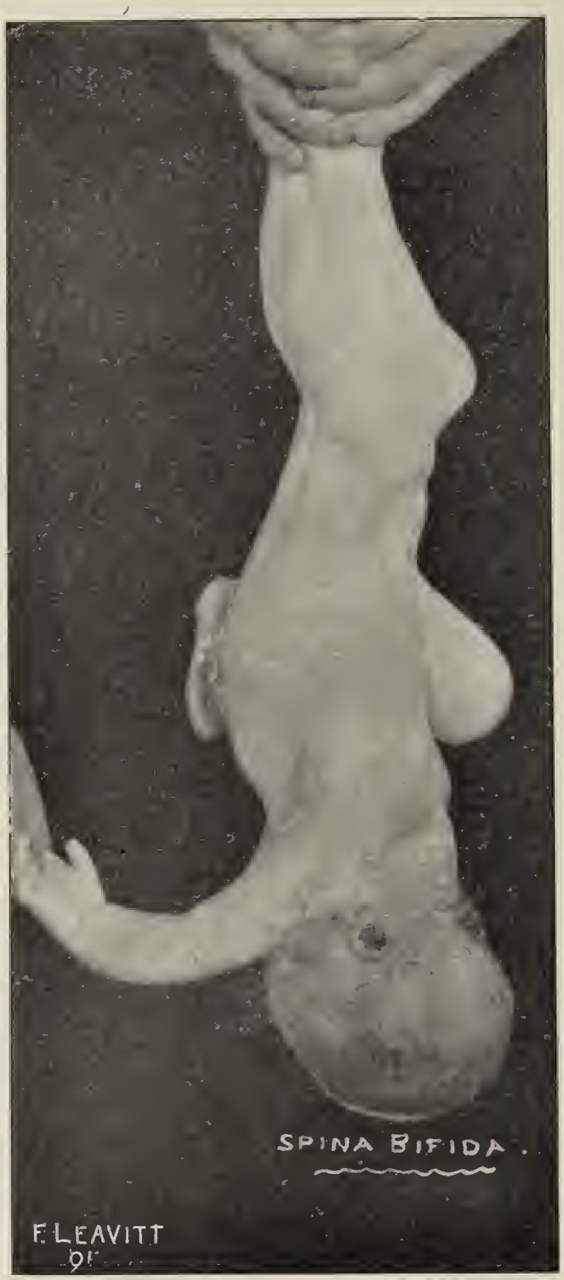
PRECOCIOUS MENSTRUATION

Baby S. On the fourth day after birth my attention was called to a bloody discharge on the infant's diaper, which was found to come from the vagina, and had the characteristic appearance of a catamenial flow. This continued for four or five days, the amount of blood passing each day being estimated to be about two drachms.

RUPTURE OF THE AMNIOTIC SAC 25 DAYS BEFORE DELIVERY

Patient's age 21; pregnant for the first time; general physical condition not up to standard, though not specially ailing. Between the latter part of October and the time of her delivery, December 25th, she was repeatedly examined, and observations recorded. The position of the fetus at first was that of a breech, lying with its back to the mother's left. The fetal heart, counted from time to time, was nearly always under 135 to the minute. Owing to the thinness of the abdominal wall, and the freedom with which the fetus could be manipulated, the case was peculiarly interesting, as well as instructive. By external palpation alone a breech could easily be converted into a vertex, and *vice versa*. Indeed, the familiarity with the prenatal existence of the creature bordered closely on the preternatural. For teaching the different positions and postures, however, the subject was certainly the most accommodating I have ever seen.

Pains simulating labor began in the afternoon of November 30th, and they became so severe



during the night as to require a hypodermic of morphia. The house physician states that the head was presenting, and that the cervix was dilated to the size of a silver dollar. The amniotic sac ruptured during the night, as much as a pint of the fluid coming away. Evidently the head did not become engaged. At least it is reported that the position changed to a transverse while the patient was being carried from one room to another. The following morning I found her still suffering a great deal of pain. The head could be brought down easily to the brim of the pelvis, but would as readily slide off into one or the other iliac spaces. Ten-grain doses of chloral were ordered to be given every hour, or until relieved. Altogether a drachm was administered. A tight-fitting binder was also applied to the abdomen.

Within twenty-four hours the patient was up, and about the hospital. Two weeks later the fetus had assumed a vertex position, which it maintained until confinement took place—twenty-five days after the rupture of the amniotic sac. Labor began in the evening of December 24th, and progressed slowly, delivery taking place about noon of the following day. I do not recall having ever seen a child so besmeared with meconium: its whole body was covered. The child lived, and the mother made a good recovery.

LANDRY'S PARALYSIS COMPLICATING PREGNANCY

Patient's age, 19; second pregnancy; attended her myself in the first labor three years before; gave a history of good health up to the 23rd of August, at which time she lost the use of her lower extremities; admitted to the city hospital two weeks later, in the fifth month of gestation. So much attention was given to the paralysis that the other condition seems to have been lost sight of until near the end of pregnancy. The position of the fetus was not positively made out, and, in fact, only a superficial examination from an obstetrical standpoint, was ever made. The first stage of labor was painless, and was completed without manifestations of suffering. At any rate, when examined the feet of the child were found in the vagina, and before she could be removed to the confinement room delivery was accomplishd. The child lived. After delivery the paralysis improved rapidly, and at the end of a month she was able to walk about the hospital.

PECULIAR ASPHYXIA AND PRECOCIOUS LACTATION OF THE NEW-BORN

Agnes M——, twenty-five years of age; American, was delivered January 12th, of a female child, weighing six and one-half pounds. General health of the mother seriously impaired by valvular heart lesion; pregnant for the first time; gestation quite free from subjective disturbances. When examined a few weeks before confinement, the position of the fetus was made out to be that of O. L. A., the fetal heart being heard to the left and below the umbilicus; rate 140; the mammary glands poorly developed; examinations of the urine always negative.

The amniotic sac ruptured twenty-four hours before labor began; delivery was easy and without lacerations. When born the infant was in pale asphyxia, limp, and the heart action feeble. Some immediate measures to stimulate respiration were employed, but without avail. The cord was then ligated and severed, and the child given to assistants to continue further means of resuscitation. Placed in a child's bath-tub, warm and cold water was alternately poured over its thorax, a hypodermic of brandy given, and, finally, artificial respiration begun, and continued until breathing became well established, which was not before the end of half an hour.

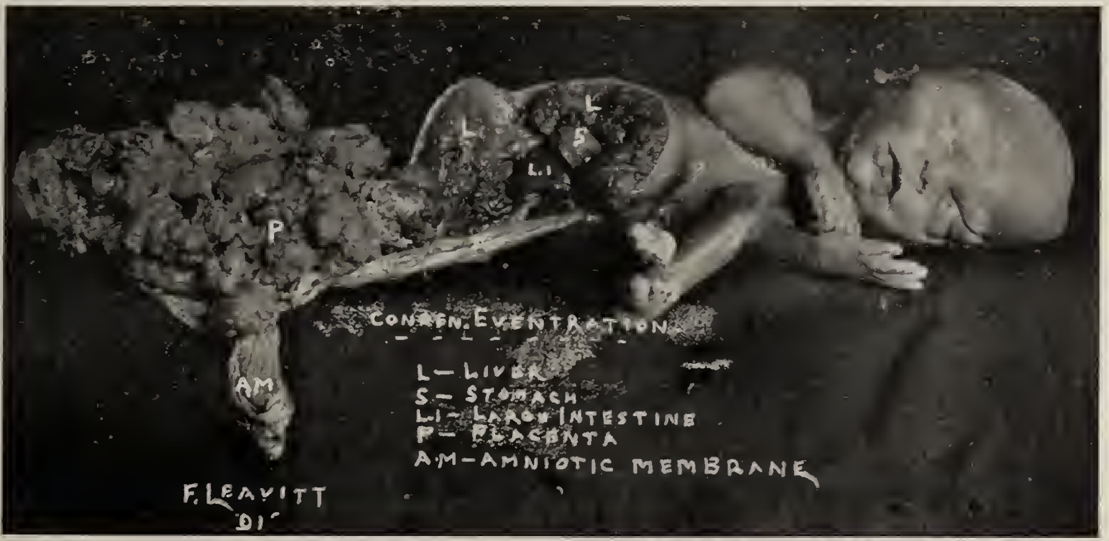
An hour and a half later, the nurse, who inspected the condition of the child frequently, found it in much the same state as when born. Artificial respiration, together with other means of stimulation, was again employed until the color returned and the breathing became normal. At frequent intervals during the next twenty-four hours it would relapse into a state of suspended respiration that required the constant watching of a nurse, the superintendent of the training-school personally attending the child throughout the night. Breathing continued uninterrupted after the first day.

Whether it was the effect of the brandy (128 minims were given hypodermically during the day) or the stimulation due to so much friction and manipulation, or to something else, I cannot say, but for four or five days the mammary glands secreted milk that could be easily squeezed from the nipples.

One other feature of the case noted was that wherever a hypodermic of brandy had been injected a spot of tissue the size of a dime sloughed out, leaving a depression as clean-cut as though it were made with a punch or other sharp instrument.

CASE OF CONGENITAL EVENTRATION. FETUS BORN DEAD AT SEVENTH MONTH

Mrs. J——, admitted to the hospital October 1st; had borne several children; last menstrual epoch early in March. The whole period of gestation up to the time of coming to the hospital was free from troublesome symptoms. Motion had ceased; no fetal heart-sounds could be made out; and there was an offensive bloody discharge from the uterus. Cleansing vaginal douches were used freely, and the patient was kept in bed pending developments. Four or five days after admission, delivery took place, the labor being short and devoid of interest other than that attached to the peculiar formation of the fetus. A tumor projected from the abdomen that proved, when opened, to contain nearly the whole abdominal viscera, including the stomach, liver, and intestines. Further examination of the fetus showed entire closure of the urogenital slit, there being no indication of anus, urethra, or generative organs, except that over the lower border of the pubes there was a small, bud-like projection, which nature may have intended for clitoris or penis in the embryonic development. The case is one where teratism is manifested in atresic, as well as extroverted, development. (Photograph shown.)



A CASE OF PELIOSIS RHEUMATICA, OR SCHŒNLEIN'S DISEASE

By Geo. Douglas Head, M. D.

MINNEAPOLIS

Three forms of purpura associated with joint symptoms or pains in the affected limbs, are recognized by clinicians.

1. A mild purpura, with or without articular pains, which appears upon the legs, and less frequently upon the arms and trunk of children. The condition is unaccompanied by fever, and is recovered from in a week or ten days.

Dr. Osler calls this purpura simplex, although many older writers describe under purpura simplex a form of the affection seen usually in old persons.

2. A purpura encountered in young adults, usually males. The attacks begin suddenly with sore throat, fever, cramp-like pains in abdomen, and sometimes with vomiting. These symptoms are followed by aching pains and lameness in various joints, usually those of the lower limbs, and the appearance of a simple purpura, a purpura urticans or pemphigoid purpura, on the affected limb. The attacks come on suddenly and are likely to recur. This form of the arthritic purpura has been called Schœnlein's disease, or peliosis rheumatica.

3. In a third form of the condition known as Henoch's purpura, there is a more or less widespread involvement of the skin of the limbs, abdomen, and genitalia in a petechial eruption, accompanied or preceded by vomiting and diarrhea, pains in the affected limbs, hemorrhage from the bowels, and casts and albumen in the urine. Henoch described three cases in children, and in none of these is it stated that a nephritis was present. In the Northwestern Lancet, Vol. XXI, No. 18, the writer reported a case of this form of purpura.

The following case is an instance of the second form of arthritic purpura, namely peliosis rheumatica: Mr. B——, aged 25 years, single, paperhanger by trade, was in perfect health until April 15, 1901, when he slipped from his ladder, straining his left leg and hip. On the same day, but previous to his fall, he noticed a lameness of the muscles of his left arm, and also some tender red spots upon this arm above the elbow, as if a number of small boils were coming in that region. The following day he complained of sore throat, was hot and sick, had much pain in his arms and legs, and noticed many red sore spots on his arms, and also on his legs below the knee. Some of these were tender to touch, and seemed slightly raised above the surface of the skin. All day of April 16th he was in bed. On the morning of April 17th he noticed other new red spots on his legs, some of which looked black near the center. His limbs ached much, especially around the joints, and he could scarcely turn himself in bed. He then called a physician.

Patient was in bed; temperature, 102.5°; pulse, 90. He complained of aching in arms and legs, and of stiffness in joints, and could scarcely turn over in bed. He said he had vomited some, and had pains in his stomach. On examination many red spots, the size of a dime and larger, some of which showed black hemorrhagic centers, could be seen upon his legs, thighs, and arms. Those on the arms were few in number.

The spots could scarcely be felt as the finger passed over the skin, and yet they looked elevated. They were tender to touch, red in color, isolated, and most numerous on the shins.

There were no purpuric spots on the body, and those on the arms showed none of the black coloration. The patient was given salicylates, kept in bed, and ordered a liquid diet.

On April 18th the lameness in the limbs and joints was better, and the red areas on the arms were disappearing, while those on the legs still persisted. Patient had no fever, and his sore throat was gone. His heart was normal, and his urine contained no albumen or casts. The same treatment was continued, and the case dismissed.

On Aug. 14th, 1901, the patient was seen in another attack of the disease. He stated that between April and August he had had a number of attacks similar to the first one, but not so severe. He said that he could tell when the attacks were about to appear. Previous to the onset his head felt dull and heavy, and he would either feel chilly or have a distinct chill, lasting a half hour or more. The lameness in his joints and limbs would then come on, accompanied by the appearance of the red, slightly raised, tender spots on his arms and legs. The spots appeared more often on the anterior surfaces of the legs below the knee than elsewhere. At the outset he vomited and had pain in his stomach in some of the attacks.

Examination revealed a large-sized red spot on his right wrist, and many smaller spots on his arms and legs. None of the spots were dark in the center, but all were tender to touch. The heart was normal; spleen not palpable. Again salicylates were ordered, and patient put to bed. He was seen again August 16th. He had no fever; lameness in limbs was present, but less severe than before; the red spots on his limbs were disappearing, and he felt much better.

CHRONIC INFLAMMATION OF THE PHARYNGEAL TONSIL WITHOUT INTERFERENCE WITH NASAL BREATHING*

By William R. Murray, Ph. B., M. D.

MINNEAPOLIS

It is not the purpose of this paper to refer to those well marked cases of adenoid growths which constitute such a well known disease of childhood, and which, fortunately, have become so well recognized as a dangerous condition; but I desire to call your attention to another type of chronic inflammation of the pharyngeal tonsil—a condition which is not sufficient to cause obstruction to respiration, but which represents a low grade of chronic inflammation, pouring out its secretion into the nasopharynx, giving rise to a post-nasal catarrh which is extremely obstinate, and causing various reflex disturbances, and, in many cases, giving rise at intervals to a subacute Eustachian salpingitis or to acute otitis media.

Since the discovery of adenoids by Meyer, and especially during recent years, the dangers of adenoid vegetations to a growing child, and the many serious complications to which they are so liable to give rise, have fortunately been so well recognized by the profession that in the well marked cases their removal is usually advised, and it may be that, in these cases of well marked hypertrophy with nasal obstruction, and the presence of the usual well marked symptoms and signs attending adenoids, in the multiplicity of the symptoms rests in a measure the safety of the patient, because they are so liable to be recognized and their removal promptly advised; but in that class of cases where there is not sufficient enlargement to cause interference with respiration, where the principal complaint may be an obstinate nasopharyngeal catarrh or a susceptibility of the patient to "take cold," I believe the underlying cause is often overlooked.

The term pharyngeal tonsil is applied to a normal structure which is situated in the roof of the nasopharynx, and is composed of lymphoid tissue presenting slight ridges on its surface and structurally composed of a fibrous connective-tissue frame-work, rich in blood-vessels and enclosing masses of lymphoid cells, the whole being covered by an epithelial layer, presenting on its surface the ciliated variety, which is continuous with that lining the respiratory tract of the nose and nasopharynx.

The nasopharynx of an infant is small, undeveloped, does not possess the dome-shaped cavity present in adults, is easily occluded in any part of its course, and even a small amount of adenoid tissue may cause obstruction in respiration, and the gradual disappearance of these marked adenoid symptoms which, if not interfered with, commonly occurs about the age of puberty, is due partly to the development of the fibrous tissue within the glands, causing constriction and partial atrophy, but it is due, also, in a large measure, to the enlargement of the nasopharynx that occurs at this time.

Later in life when the post-nasal space has become fully developed, a small amount of adenoid tissue may remain without causing any interference with nasal respiration, or the gland may remain in a state of chronic inflammation, causing a post-nasal catarrh, a congestion of the nasal cavities, of the larynx or bronchi, and in some cases accompanied by cough, hoarseness, indigestion, etc.

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*Read before the Minnesota State Medical Society, June 19, 1902.

Pathologically the presence of a chronically inflamed pharyngeal tonsil presents two different types, the one, occurring chiefly, though not always, in chudren, and presenting a condition of hypertrophy, soft in consistency and very vascular, fills usually the small nasopharyngeal space of a child, and is a cause of nasal obstruction, and usually extends laterally to the orifices of the Eustachian tubes. To this form various names are applied, such as adenoids, adenoid vegetations, hypertrophy of the pharyngeal tonsil, etc. In the second class, occurring more often in adults, we find the gland chronically inflamed without much hypertrophy, fibrous in structure, smooth, and with irregular surface, presenting slight fissures and follicles, from which considerable discharge is secreted. It is not attended by any obstruction to nasal respiration, and we have it existing as a sequel to a marked obstructive hypertrophy which existed in childhood, or it may have existed only as a chronic inflammation *without* hypertrophy.

In this form of inflammation the symptoms differ from those present with an obstructive hypertrophy, and the principal condition for which the patient seeks relief may be an obstinate and chronic post-nasal catarrh, sometimes accompanied by a stubborn cough, with expectoration, and a constant irritation of the throat. On inspection the pharnygeal tonsil appears but slightly enlarged, is firm, and is usually covered with a mucous secretion. The nasal passages, unless there is an accompanying chronic rhinitis or hypertrophied turbinals, are usually free from secretion, but there is present a chronic discharge, which may find its way forward into the nasal cavities, or, dropping down, may excite a laryngitis or bronchitis. It is attended, on the patient's part, by a hawking and spitting, especially on arising in the morning, and in the effort to clear the throat from the accumulated discharge, which has become tenacious and dry, and the low grade of chronic inflammation in the tonsil is subject, at intervals, to a subacute inflammation, giving rise to an Eustachian salpingitis, or the inflammatory process, passing to the middle ear, may give rise to a subacute otitis media, rather than to the acute otitis which so often accompanies the marked hypertrophy of the pharyngeal tonsil, and which is so commonly present in childhood.

The most frequent complication accompanying a chronic inflammation of the pharyngeal tonsil is the tendency to acute congestion of the gland, with involvement of the nasal passages, or, as the patient states, repeated "colds in the head," during which there may be a closure of the Eustachian tubes, or direct involvement of Eustachian tubes may occur from the presence in the nasopharynx of the mucopurulent secretion attending the post-nasal catarrh, or the ear involvement may progress into a chronic condition resulting in a chronic otitis media.

The term "throat deafness" is sometimes applied to this condition of Eustachian obstruction resulting from nasopharyngeal catarrh; and as Eustachian catarrh is the origin of a large proportion of the diseases of the middle ear, it naturally follows that, given a case of disease of the middle ear, in which the starting-point was an Eustachian salpingitis, and in which the causative factor is an abnormal condition in the nasopharynx, we can hope for no improvement in the middle ear until the source of the trouble has been removed.

Considerable attention has been directed recently to chronic inflammation of lymphatic structures in the respiratory tract as a possible infection atrium for tuberculous germs, and while, so far as the writer is aware, there have been no published statistics showing the connection between tuberculosis and the type of low-grade inflammation of the pharyngeal tonsil without much hypertrophy, investigators have shown tuberculosis to be present in many cases of the more pronounced forms of adenoid growths.

Brindil found microscopic evidence of tuberculosis in 12.5 per cent of his cases of hypertrophy of the pharyngeal tonsil; Gottstein found 12 per cent tuberculous; and Plunder and Fisher of Hamburg found 15 per cent tuberculous.

Among other frequent complications of this form of chronic inflammation we find rhinitis, laryngitis, and bronchitis due to direct extension of the inflammatory process to contiguous parts, or gastric and intestinal disturbances due to the presence of the muco-purulent discharge which has found its way into the digestive tract.

While the treatment in these cases consists chiefly in the thorough removal of the diseased gland by means of the curette and forceps, followed by topical treatment in the form of cleansing and stimulating applications in many cases constitutional treatment in the form of tonics, etc., and the correction of gastric and intestinal disturbances, which sometimes co-exist, will be found necessary.

CONCLUSIONS

1.—That a chronic inflammation of the pharyngeal tonsil may exist without any obstruction to nasal respiration.

2.—That many cases of post-nasal catarrh are due to the presence of a chronically inflamed pharyngeal tonsil.

3.—That some cases of acute and chronic otitis media have their origin in an Eustachian salpingitis, which was due to a low grade of inflammation of the pharyngeal tonsil.

4.—That in the treatment of some cases of chronic otitis media the source of the trouble may be overlooked, and that no permanent improvement will follow until the underlying cause be removed.

5.—That if the presence of a chronically inflamed pharnygeal tonsil were more generally recognized and thoroughly removed, there would be fewer cases of chronic otitis media.

PHYSICAL EDUCATION*

By James W. Robertson, M. D.

LITCHFIELD, MINN.

Physical education consists in training of the bodily organs and powers with a view to the promotion of health and vigor.

Many smiles ripple over the countenances of the people whenever a newspaper announces the death of a person from "heart failure." The solemnity of the announcement is overwhelmed by the unusually amusing occurrence that the party under consideration came suddenly to the end of his worldly existence by a disease of the heart known to the medical profession as "heart failure"; and we frequently hear the profession severely criticised for this common diagnosis. I would say in defence of the medical profession that in a very large proportion of the cases the diagnosis is correct, and I might say that many more could be added to the list without stretching the truth. Now, the question naturally arises, What are the causes of this frail condition of so many hearts? The question answers itself: A lack of physical education.

Again, we see our asylums over-filled with insane persons, mostly women, and the question again comes forward, What causes the frail condition of so many minds? I would immediately answer, Lack of physical education.

As we walk along the streets we meet thousands of wrecks, stoop-shouldered, deformed, and decrepit, hawking and spitting their lives away—suffering with that ever-increasing but terrible disease, tuberculosis, commonly known as consumption. You ask again, What is the cause of this difficulty? I answer, Ignorance and lack of physical education.

As you move along the street you see many poor, drunken wretches dragging themselves from saloon to saloon. And you ask again the cause of the trouble. I would say, Ignorance and lack of physical education.

Your next question naturally would be, In what way does physical education prevent people dying of heart failure, from going insane, from taking the terrible tuberculosis, and from becoming drunkards? The answers to these questions are far more simple than one would suppose. In the first place heart failure is produced by a weak heart, and an examination of one after death would reveal the fact that many of the muscular fibres of the heart have undergone a fatty degeneration or, in other words, have turned to fat, and consequently have lost their power to contract, and are therefore of no use for heart purposes. Now, when many of these fibres have turned into fat, the heart gradually but surely loses its power to propel the blood through the body, and the individual so afflicted dies of heart failure.

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*Read before the Litchfield Literary Club.

Your next question would be, How can physical culture prevent a fatty degeneration of the heart? I would answer by saying that all the muscles of the body, both voluntary and involuntary, can be kept by culture in proper shape and tone, so that none of these degenerations will take place, and consequently there will be no heart failures. But just so long as physical training is neglected by a large majority of the people, then just so long shall we see sudden deaths by heart failures.

Again, on the other hand, great care must be taken not to over-work or over-develop any muscle or set of muscles, but they should all be developed alike and not over-trained. It is not necessary to make wrestlers or prize fighters of our boys, or train the girls to be champion bicyclists, world-beaters, or even husband-beaters; but we can give them better shapes, and better lungs, hearts, and muscles.

To the question, why are our insane asylums so full of people, I would answer, usually because of the lack of physical development of the muscular structures, and an improper development of the brain structures. When a little overstrain comes and the nutrition of the brain is seriously interfered with, the power to control the mind is lost, and the patient becomes more or less insane; and if the disease is not attended to in its incipiency, it frequently becomes permanent. An early training of both body and mind would largely prevent this condition.

Again, consumption very seldom attacks persons physically developed, but selects for its victims the numerous under-developed individuals who are so common in this beautiful country of ours—conditions usually due to ignorance and carelessness in the care and feeding of infants and children, and in not developing to their fullest extent the muscular system, the digestive system, the heart and lung capacity of each individual. Most consumptives have the ignorance of their parents to thank for their physical condition. Many of them are a good deal like Topsy, "They simply growd." They did not know any better and they could not help it. The round-shouldered, pale-faced, short-nosed, weak-lunged persons having no vital energy are just a snap for good healthy tubercular bacilli on the lookout for a job. When all too late, and the germs are nicely located in hundreds of places in the lungs, bronchial tubes, and lymphatic glands, so dear to the servants of death; when night sweats and deep cough give sure indications that these tenants of death have undisputed possession, then these individuals hie themselves to a physician, and want to be cured. They want to try Koch's lymph, Shurly's vapor, or even cod liver oil or whiskey. When all too late they are perfectly willing to take the proper daily exercise, to eat the proper and nutritious foods; but their energies, like their muscles, are developed too late, and then their friends blame the physicians because they are not skilful enough to overcome the ignorance and laziness that have dominated their early lives, when all too late they are ready to begin the neglected physical education. People are ever ready to lock the stable door after the horse is stolen. Many of these individuals drag along for a year or two of weary, coughing lives, and then swell the lists of deaths from tuberculosis—monuments to their own and their parents' stupidity.

You ask how can a lack of physical development produce drunkenness? In answer I would say that in the tremendous "push" required in the great rush for a living, which is everywhere noticed in our land, an individual who is lacking in proper physical education or development of both mind and body begins to fall behind in the race; and he wonders what is the matter. He struggles on, but becomes exhausted, and yet feels that he must still push forward and cannot. He loves his family, and is anxious to succeed in business, but finds himself losing ground day by day. What does a man do under such circumstances? He naturally steps into a saloon and takes a bracer in the shape of a whiskey cock-tail. It increases his energy, and he works better. Next day he takes two, and finds that he can keep up with the "band-wagon." And for a few months, or perhaps a year or two, he battles away, but finds it necessary to increase the amount of his whiskey, month by month and year by year, until finally the demon has him by the throat, and down he goes to a drunkard's grave.

Who is to blame for this disaster? Partly the man himself, of course; certainly not the saloon-keeper; but mostly the person or persons who had charge of his early development. I often feel a great sorrow for little children when I see their ignorant mothers forcing down their little necks some patent baby food or some soothing syrup, the mothers little thinking at the time that they are laying a foundation in this simple way for a fatty heart, tuberculosis, insanity, or drunkenness. Do they ever listen to the advice of their physicians? No. Some old woman, even more ignorant than themselves, has recommended a remedy, and told them how nice it is for the poor little dears.

What is the remedy for all these disorders of mankind? First and foremost I would put the proper education of both mind and body. Educate the muscles, the stomach, the heart, the lungs, and the brain; and begin this education as soon as the child is born, and keep it steadily progressing as long as the child is under parental care and control. All the public schools, from the lowest to the very highest, should have a thoroughly equipped gymnasium, and the teachers should be able to instruct the children in physical development as well as in the education of the mind.

I would like to ask a question: Of what use is it for the state to educate the children, take them through all the schools, and then have them die of tuberculosis? It is far better to give the children good health and fine constitutions than to leave them millionaires and sickly. Let the boys and girls play ball, tennis, row boats, ride bicycles or horses, run foot races or lawn-mowers. If physical training was taken up as it should be in the public schools, and the children taught how to live and keep well, in less than a century tuberculosis would be nearly blotted from our beautiful land. Did any one ever hear of any of the students educated at West Point dying of tuberculosis or going insane? Very few of them die of fatty heart or drunkenness. This is simply because of the physical training which they are obliged to undergo during student days. Let the public schools take this care of their students, and the world will be wiser and stronger.

Many individuals cannot with safety study Christianity without proper mental and physical training, as you will readily see by observing the number of persons sent every year to the asylums of our state for insanity on religious subjects. The question naturally arises, How can we in any way prevent or mitigate these evils of ignorance? I can see only one way, and that is to have physical training taught in our public schools—not only in the high schools, but in every public school. And such training should begin as soon as the child enters the school, and stop only when the pupil graduates. It is only in this manner that we can counteract the negligence, the laziness, the bad hygienic conditions, and bad home influences to which so many children are subjected. The great army of teachers throughout the state are more intelligent, more capable and in better position to teach these little ones how to live, to breathe, and even how to play, than the numerous parents from numerous countries with their antiquated ideas and their cranky notions. The first endeavor should be to make our children healthful and to educate their bodies, and then it will be easy enough to educate their minds. Have them grow up from the very start perfect in every way.

It is a very rare occurrence that a baby is deformed at birth. Their little chests stick out, their lungs are perfect, and their muscles are fine; and they continue so for five or six years, when the effects of lack of physical training, improper feeding, and improper hygiene begin to be made manifest. It is at this time that every care should be taken to develop the lungs, the heart, the stomach, the muscles, and the mind. It is during this growing period of childhood that the greatest care should be exercised in the training of children.

Schoolrooms should be properly ventilated, sufficiently and properly lighted, and the seats and desks should be adjusted to each individual child. The building of a school-house should not be left to an architect whose only ambition is to make a beautiful building and sacrifice everything to architectural beauty; neither should it be left to a school-board whose only idea is to build it as cheaply as possible. I can tell you it takes lots of brains to build a school-house that meets all the requirements of the present age, and will not poison our children with bad air, spoil their eyes with bad light, deform their bodies by sitting in bad seats, and give them catarrh by sitting in draughts and badly heated rooms.

As I said before, what is the use of the state's educating the pupils' minds if it does not educate their bodies? Therefore, our public schools should have gymnasiums. Something must be done, and that very soon, if we would overcome the tendency to tuberculosis which kills more people in our state than any other disease.

We know that disease does not so readily attack persons who are physically well-developed as it does those who are weakly and undeveloped. Now, if this is a fact, why should we hesitate to begin at once to develop the whole race, and gradually increase this development until we become, not only the best educated people in mind, but physically the best people on earth?

TREATMENT OF SEPSIS

Early in the present year the value of high, long-continued rectal irrigation in the treatment of sepsis was exploited by J. Wernitz of Odessa (C'blatt f. Gynäk., 1902, No. 23). The same author continues a discussion of this means of combating that deadly condition and concludes as follows: The irrigation first of all cleanses the bowel of all deleterious matters whose absorption may lead to increase in the symptoms and whose evacuation is especially important whenever the sepsis is connected with peritonitis. Paresis and paralysis of the bowel is so common in this condition that any means of causing evacuation will be acceptable. After a short time of slow absorption of the hot saline fluid the heart-action and circulatory sufficiency increase, then the secretion of perspiration and of urine becomes more active and still more of the poisons are removed from the body. The temperature then falls and under the improved circulation often the patient is much better and in a hopeful condition after a few hours. The procedure is without danger, can be carried out upon any patient, and has so much in its favor that no one should ever omit it in the management of these cases.—Medical News.

LANOLINE IN DRESSINGS

Fatty substances were at one time very extensively employed as a part of surgical dressings prior to the advent of antiseptic and aseptic surgery. Obediently, however, to the teaching of such men as Kocher practically all fatty substances about wounds have been abandoned, because their fat-basis has been shown to be a convenient and fertile soil for the propagation of many forms of bacteria. It may be granted that antiseptic ointments do not fulfil the dictates of rational treatment, but this is not the fact concerning pure fat, like lanoline, according to P. von Bruns and B. Honsell (La sem. méd., 1902, No. 23). These surgeons have found that for open wounds gauze soaked in lanoline and covered with ordinary cotton fulfils all the uses of a wet dressing and has none of its inconveniences. It is well known that many wet dressings create a maceration of the skin and lead to dermatites, more or less tenacious, and that after being in place twelve to twenty-four hours their bactericidal powers are totally dissipated and their moisture tends to imprison the secretions of the wound and change them into a very productive soil for all bacteria. There are certain cases, however, in which the indications are no disturbance of the wound or of the affected part and the application of an extensive dressing, although the secretions from the wound may be really very abundant. It is in just these cases that Honsell recommends lanoline dressings. This substance liquefies under the body heat, permeates the gauze and spreads over the wound surface as a thin layer, becomes readily permeable to the secretions from the wound and imparts to the patient a feeling of peculiar freshness. The lanoline gauze permits discharges to pass through its meshes into the absorbent cotton which forms the next layer of the dressing. These lanoline dressings are also available to combat all forms of cutaneous irritation consequent upon the use of the various common wet dressings, to soothe the reaction after burns, to protect the granulations of wounds from the adhesion of gauze to them with the consequent pain and bleeding following their removal, to guard against offence to the skin by the ordinary wet dressings through making the layer next to the skin non-adherent. So far as the purposes of asepsis and antisepsis are concerned, lanoline may be regarded as a feeble antiseptic, but for sensible security it must be employed under all the usual precautions.—Medical News.

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TREATMENT OF LOCOMOTOR ATAXIA

Of the many forms of diseases of the spinal cord, ataxia is the one that is most frequently recognized by the physician. The early diagnosis is most important for early and abortive treatment, or, at all events, to render the disease stationary.

Of the typical forms there is less likelihood of error. The long prodromata of pains, dull, sharp or lightning in character, at irregular intervals but of several years' duration, are suggestive of some serious or probable chronic nervous disorder. If these pains are supplemented with a change in the pupil or pupils, sluggish or weak in reaction, or rigid to light,—the Argyll-Robertson pupil,—and to these two symptoms, we add the loss of knee-jerk in one or both extremities, the diagnosis of tabes is simple.

On the other hand, the chain of symptoms may come on in a very irregular manner: the pains appear late, and the pupils are responsive to light and accommodation long after the appearance of the loss of knee-jerks and the marked incoördination that has annoyed the patient.

In other cases, gastric crises, with vomiting, bladder weakness, girdle sensations, and disturbances of sensation in the feet and legs, may prefering from the invasion of syphilis in the nercede or mask the pupillary changes and the lost patellar reflex. Then, too, when a patient is sufvous system, it is with difficulty that tabes can be definitely diagnosed.

Whatever the form of tabes, the treatment must begin early, if any improvement is to be expected, or the gray degeneration of the posterior tracts of the spinal cord will advance to a point where little or nothing can be done. If we suppose, for sake of argument, that the disease is initially of the small blood-vessels in the posterior roots, the greater is the necessity of treatment. Whatever the origin, whatever the stage of the disease, the patient must be assured a definite amount of rest—physiological rest—in bed or on a couch for several hours each day. If early in the disease, the rest should be absolute for a number of weeks with the usual adjuncts of the rest-cure, complete or modified according to circumstances. The acute stage will often respond quickly to treatment, leaving a minor lesion behind it, the later stages will improve, and many of the annoying symptoms subside permanently or for a time, relative to the after-care and life of the individual. If baths are employed, they should consist of hot tub or hot sprays gradually cooled down until the stimulant effect of the cold is evident. Prolonged hot baths or pack should be employed only in those in good physical vigor, then followed by one or two hours' rest in bed. In some cases the salt rub, followed by a warm sponge or tub bath, is refreshing and grateful.

Electricity is of more or less service, and is valuable as an agent in the variation of treatment to keep the patient in line and under orders and observation. Galvanism applied over the body generally is soothing, and may divert the circulation of the cord indirectly. Faradism is much more satisfactory, and serves the double purpose of giving electricity and massage, if administered over the muscles with a roller electrode. It has at times a sedative effect upon the lightning pains when not extreme or severe in their paroxysms.

Massage and Swedish movements are particularly beneficial if properly used under the direction of the physician, and adapted to each individual case. When indiscriminately ordered, more harm than help may be expected. The tabetic should be urged to rest rather than exert himself, hence the necessity of properly directed movements which may ultimately lead to the adoption of the Frankel system of exercises to restore or re-educate the incoördinate muscle groups.

The patient who, by force of circumstances, is unable to give the time and attention to the relief of his tabes, is unfortunate in the extreme. He must accept the rest-cure as far as possible, give himself up at odd moments and before and after the work of the day is ended, deny himself most of the minor pleasures of the laborer, and take his treatment when and where it suits his convenience.

He will seek aid by drugs of all kinds, and will in the end be disappointed. Granting that his tabes is the result of syphilis, the antispecific remedies may promise relief and cure, yet in the majority of cases they are useless, or, at most, temporary in their good effect. When the tabes is unquestionably the outcome of nervous syphilis, the mercurials and iodides must be employed and pushed to tolerance, hoping for a favorable outcome.

The other measures for the relief of ataxia are numerous and usually worthless. Suspension, nerve stretching, and the cautery are only occasionally successful in doubtful or pseudo forms of the disease. The continual employment of the salts of gold and silver, unless combined with the other measures advocated, are questionable in their effects. Eight to ten grains of sodium salicylate with one-half or three-quarters of a grain of fresh extract of cannabis indica, given two or three times a day, are frequently beneficial in the annoying pains. Phenacetin, antipyrin, methylene-blue and similar preparations are useful as alternates. In the majority of cases a stronger sedative or opiate is demanded, and it is wiser and safer to lead up to morphine by the use of the milder salts, Heroin in from 1-24 to 1-6 gr. doses, Dionin in from 1-6 to ½ gr., Codeine, ¼ to 1 gr.

Postpone the use of morphine indefinitely if possible, but if imperative give the smallest possible dose for relief, and suspend it as quickly as practicable, substituting the milder drugs. In occasional cases the hypodermic daily use of strychnine, in gradually increasing doses, beginning with 1-20 gr. and up to ¼ gr., once a day, will act as a sedative, and thus relieve the physician, and keep the patient free from the morphine habit.

Rest, quiet and measures to build up the patient is the treatment of locomotor ataxia.

THE PATIENT HIMSELF

The rarest and most valuable quality in a medical adviser is good judgment and practical wisdom in recognizing the whole situation. In most cases the doctor has three things to manage: the disease, the patient himself, and his friends and environment, and under the latter may be grouped a whole host of variable factors.

The average practitioner is much better equipped to manage the disease than to manage the patient and his environment. Occasionally the doctor would do well to keep an eye on himself, since cases are not unknown in which the disease has been chiefly in the mind of the medical attendant, or at least largely originated there.

Physicians sometimes treat cases which are a distinct nuisance to them. This curious fact is due to a multitude of fallacious and seductive reasons,—such as egotism, haste for immediate results, fear of competition, inability to refuse a polite or flattering request as the shortest and politest way to get rid of troublesome clamorers, the view that the patient may go further and fare worse, etc.; but chiefly that the practitioner feels that he fully understands the disease, and does not stop to consider whether or not he has the facilities to manage the patient, or, in case he recognizes the latter necessary factor, knows of no good place to refer him. Perhaps a vast majority, certainly the most clamorous of those applying to us for relief, need difficult operations and strong medicines far less than systematic management upon very simple hygienic principles, quite well understood by any level-headed practitioner of experience, but beyond the wisdom of Solomon and the patience of Job to personally carry out under the circumstances.

The various ailments of the public, ranging from mental pruritus to "ingrowing money," from ovarian dropsy to the suspicion of varicocele, from compound fracture to the simple habitual enjoyment of poor health, require a wide range of therapeutics, and presents many and various needs, not well supplied by all who would practice general surgery or those who find interest only in internal medication. Most of these people need rational management and regulation very badly. In a few instances an entertainer or guardian might do, but in most a judicious system of management adapted to the wants of the case is needed. The medical profession quite naturally aspires to treat serious cases, to set broken legs, to remove big tumors, and to give specifics; but a vast majority of patients, perhaps unfortunately, do not happen to have broken bones or neoplasms, nor malaria or lues. Remarkably little attention as yet has been given to the organization of facilities to meet these pressing needs, and therefore the public tends to run off to the various quackish fads which flourish in response to a long-felt want, much to the relief of the busy doctor, to the complaint of the idle doctor, with comparatively little benefit to themselves, and, very unfortunately, to the great injury of some misguided sufferers attracted by the loud and always premature enthusiasm of any new miracle that temporarily diverts their attention from themselves.

The present resources of medical science in the treatment of diseases are very great, but in no country are these resources so organized and applied as to yield the best results. In some countries they are better adjusted than in others. In Germany the number of "Kurs" and "Kurorts" is so great that neither patient nor practitioner will look far for some recognized "kur" or system of treatment fairly adapted to most any infirmity. The Luftkurs, Molkenkurs, Traubeinkurs, Karlesbads, etc., are far from free from some elements of quackery, but they are at least free from the gross charlatanry and harm of our quack fads. Doubtless, ere long our profession will learn to look after the lesser or, at least, less definite ill of the multitude by the organization of facilities for treating these troublesome cases by the rational means more or less recognized by all, but neglected largely from want of reliable practitioners and institutes of massage, hydropathy, rest, entertainment, and the various influences which recuperate body and mind. In many cases it is not profound science, but a good system of management that is needed. A move is being made in this direction in this city in the proposed establishment under professional patronage of a Swedish movement institute where physicians may direct their patients for this form of treatment without the addition of quackery.

The matter of getting patients into the right channels for the best treatment is a most difficult one. Some patients will persist in going to their family physician for their surgery, and to the surgeon for their functional disorders; some dote on specialists and go to them for very ordinary ailments; others refuse to see a specialist as long as any general practitioner can be induced to treat them. Some people seem to have a genius for seeking relief in the most impossible quarters. There are likewise some practitioners who seem to aspire to labor in impracticable fields.

Every popular need is bound to be catered to in some sort of way, but the only way efficiently and permanently to meet it is by intelligent organization. When the masseur rises up, self-made, to meet the popular demands, he rubs everything alike,—sarcoma, gumma, Pott's disease, stiff joint, and sprain,—doing some good and much evil. Taught, guided, and utilized by the medical profession, he becomes more useful and less injurious.

Most popular medical delusions contain a grain of truth, often a small one, with a weight of evil which soon sinks it. Many of them would never have arisen but for the many abuses which are rarely long absent from legitimate medicine. The well balanced mind is rare. It is more or less the tendency of all—regular, irregular, quack, and layman—to run every one through the same course. If some surgeons would take Mr. Dooly's advice, and open more windows and fewer patients; if some physicians gave more advice and less medicine to the wrong case; and if we could all comprehend that shrewd diagnosis, wise judgment based on broad clinical experience, and skillful directing constitute the highest form of medical service, and that to secure good results is the main end of medical and surgical practice; and if we could arrange for the more complete utilization of the knowledge which we now possess, it might, on the whole, be better for all concerned. The pursuit of science has been for many years so strenuous that the art of medical practice has no doubt suffered somewhat; and the patient himself has been neglected to a certain extent.

James H. Dunn.

BOOK NOTICES

SYPHILIS: A Symposium. Special Contributions by L. Duncan Bulkley, A. M., M. D., Follen Cabot, Jr., M. D., Louis A. Duhring, M. D., Prof. Fournier, M. D., Eugene Fuller, M. D., E. B. Glesson, M. D., William S. Gottheil, M. D., Robert H. Green, A. M., M. D., Norman B. Gwyn, M. D., Orville Horwitz, M. D., Edward L. Keyes, M. D., G. Frank Lydston, M. D., D. J. McCarthy, M. D., Thomas G. Morton, M. D., Boardman Reed, M. D., A. Robin, M. D., J. D. Thomas, M. D. New York. E. B. Treat & Co. 1902.

Various diversions in the opinions expressed by the contributors to this symposium add not a little to its interest. Several of the writers are known to have decided views upon syphilis, views that are different from those commonly held. The various monographs give a chance for these views to gets an airing, and some readers will no doubt call one or two of the writers cranks.

Particularly interesting are the two chapters on the extragenital chancre, one of which is by Dr. L. Duncan Bulkley, of New York, with whom syphilis of the innocent is a favorite topic. To the general practitioner the extragenital chancre is rather a rare sight, and it astonishes him somewhat to find that even a specialist is able to describe many cases. All will admit that to overlook a case of syphilis of irregular origin would be a most mortifying and serious blunder.

WM. DAVIS.

THE PRINCIPLES OF BACTERIOLOGY: A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., Professor of Hygiene and Bacteriology, and Director of Laboratory of Hygiene, University of Pennsylvania. Sixth Edition, Enlarged and Thoroughly Revised. With 111 Illustrations, of which 26 are Colored. Price, $2.75. Lee Brothers & Co., Philadelphia and New York. 1902.

The ten years that have elapsed since the appearance of the first edition of Abbott's Bacteriology have seen a marvelous growth of this branch of science, a growth that is faithfully mirrored in this sixth edition, which is fully three times the size of the original work.

In its notice of the book, when it first came out, the Lancet had only words of commendation. The work treats of both the theoretical and the practical side of bacteriology, and it is difficult to say which side of the subject is better handled. It is a book to have in the laboratory beside the microscope and the test-tube, and a book to have on the library shelf for reference upon any subject connected with the relation of bacteria to disease. The chapter on infection and immunity alone makes the book well worth having. The present edition, as compared with the last, contains important additions relating to the bacteriology of epidemic cerebrospinal meningitis, of dysentery and of tuberculosis. During the last three years solid advances have been made in the knowledge of the germs of these diseases. Other bacteria have been studied in the meantime by thousands of observers but the results of these studies are not sufficiently certain to warrant incorporating them into a permanent work.

WM. DAVIS.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medicine School. Volume IV. Gynecology. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago. With the Collaboration of William Healy, A. B., M. D. March, 1902. Chicago: The Year Book Publishers, 40 Dearborn St. [Price, $1.25 per volume.]

Under the head of general diagnosis and treatment, a review is made of the new instruments and the improvements in operative measures that have been suggested lately. Another section is devoted to infections, and then are taken up in order tumors, traumatisms, displacements and the disorders of menstruation. Throughout the work there is no wandering from the gynecological aspect of the case, and the abstracts of the works of the several authors quoted are well condensed.

The editor of the year book cannot be held responsible for all the theories offered and the suggestions made by the various authors quoted. It is pretty certain that Dr. Dudley would not indorse Krönig's conclusion that cases of gonorrheal pyosalpinx do about as well without operation as with it, that there is no danger to life from gonorrheal infection in women and that even a large abscess of a tube does no better if opened and drained. Nor would Dr. Dudley be likely to adopt in his own practice the suggestion of H. P. Newman that the young girl should be prepared for menstrual life by gynecological treatment, beginning at once with topical applications if there is dysmenorrhea with the first periods. A review of medical literature must contain the bad as well as the good; and the absurdities quoted above make the sensible suggestion stand out by contrast.

International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Surgery, Neurology, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and General Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattel, A. M., M. D., Philadelphia, U. S. A. With the collaboration of John B. Murader, M. D., Montreal, H. C. Wood, M. D., Philadelphia; T. M. Rotch, M. D., Boston; E. Landott, M. D., Paris; Thomas G. Morton, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh, and John Harold, M. D., London. With Regular Correspondents in Montreal, London, Paris, Leipsic, and Vienna. Volume I, Twelfth Series, 1902. Philadelphia: J. B. Lippincott Company. 1902.

Beginning with biographical notices of Drs. S. Weir Mitchell and John A. Wyeth, this volume takes up the subject of therapeutics. In a lecture on the use of opium in daily practice, Dr. Arthur V. Meigs takes surprisingly conservative ground in some respects. He puts opium at the head of the list of useful drugs but has little liking for the use of morphia hypodermically. He once gave a hypodermic of a quarter of a grain to a patient with acute insanity and has been scared ever since. He mentions giving one-sixth of a grain of morphia under the skin to a patient with uremic convulsions as if this were the height of audacity.

A special article on habitual constipation is contributed by Boas, the inventor of the breakfast. As it deals with the subject from the German standpoint it has particular interest for readers in this country.

A case of fatal poisoning following the use of thyroid extract carries its own lesson.

In general medicine a lecture on gastro-intestinal autointoxication contains a very scientific analysis of this condition, while in surgery there are accounts of the clinics of several leading men, with numerous valuable suggestions and hints.

A new and useful addition to the clinics is a summary of the progress of medicine during the past year; that for the year 1901 is written by Dr. E. W. Watson. It is brief and to the point.

Wm. Davis.

The Eye, Ear, Nose, and Throat. Volume III. One of ten volumes comprising the Practical Medicine Series of Year Books. Edited by Casey A. Wood, C. M., M. D., Professor of Clinical Opthalmology, Medical Department, University of Illinois, etc. (Eye). Albert H. Andrews, M. D., Professor of Otology, Chicago Post-Graduate Medical School, etc. (Ear). T. Melville Hardie, A. M., M. D., Clinical Professor of Laryngology, Rhinology and Otology, Medical Department, University of Illinois, etc. (Nose and Throat). The Practical Medicine Series of Year-Books is under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, etc. Illustrated, and having 328 pages of text. Cloth, $1.50 net. Chicago: The Year Book Publishers.

This is the third volume issued in the Practical Medicine Series, and it fully comes up to the high standard established by its predecessors. The authors have undertaken a difficult task in endeavoring to select from the great mass of material published during the past eighteen months, that which would be most likely to prove of value to readers.

There is nothing in this volume which a specialist should not read, though there is much that the general practitioner will find of no practical benefit. The reviewer cannot find any occasion to criticize the special editors, for he presumes that they have carried out the purposes contemplated in the general plan. He believes, however, that a year book on the eye, ear, nose, and throat, and comprised in a general series, should be issued for the general practitioner, and should contain only abstracts of interest and value to such practitioners. This would enable the special editors to produce a volume containing a résumé of nearly everything of practical service to the subscribers to such a series, for all of the material of interest only to the specialist would be eliminated. Another and larger volume, or perhaps several volumes, could then be published containing abstracts of everything of value to the specialist. Such a work, edited under the supervision of these same authors, would fill a gap in the library of specialists in these branches, and it would receive substantial support.

The present series is an out-growth of year books on the ear, nose, and throat issued in 1900 and 1901, by Drs. Head and Andrews, which met with deserved success.

In his introduction, Casey Wood says: "It was found impossible to present, by any effective process of condensation and in the space at his command, even a short review of every meritorious contribution to ophthalmology that has lately appeared, not only in our tongue but in the French, German, Italian, Spanish, Dutch, Scandinavian, and Slavonic languages. For excerpts from publications in the four last named, the editor is indebted to the managing editor of the Annals of Ophthalmology, Dr. H. V. Wurdemann, and to his efficient corps of collaborators. In making the selections in question the intention has been not to deal exclusively with matters that interest the specialist only, but to include, for the benefit of the general reader, such subjects as the relations of ophthalmology to extra-ocular diseases."

The general editor has made a wise choice in his selection of his special editors for the preparation of this volume, and the extracts contained in the entire book may be said to represent the progress that has taken place in these specialties. Dr. Wood has the rare faculty of expressing ideas in the fewest words and in clear language. In this work he has made each abstract so complete that the reader can secure a definite understanding of every article. Drs. Andrews and Hardie have made careful selections in their departments, but they have much less space in which to cover the whole subject.

There are a number of good illustrations. Every subject is divided under different heads, and subdivided in such a manner that the reader may readily select subjects of the most interest.

Judging from the three volumes the reviewer has seen, he predicts great success for the future of the series. FRANK C. TODD.

"A household composed exclusively of women is always liable to take a turn in the eccentric and hysterical direction."

"Many a man thinks it is a virtue that keeps him from turning a rascal, when it is only a full stomach. One should be careful and not mistake potatoes for principle."

MISCELLANY

AMERICAN MINERAL SPRINGS

There is so little known about our own mineral springs that many American physicians are accustomed to send their patients to Europe, believing that it would be impossible to attain the same amount of improvement from springs in our own country. J. K. Crook (Med. Rec., June 28, 1902) has investigated a large number of springs and finds that in every class except one the waters of this country are richer in mineral ingredients than are those of Europe. Not merely in potency of a few individual springs, but in general variety of mineral constituents which go to make up an attractive medicinal water there are within this country, with the single exception of the sulphated salines, better waters and more of them than in Europe. There are waters which are similar to, but not so rich as the saline purgative waters, Hunyadi Janos, Carabana and Apenta. The American waters have the same therapeutic effect, but must be used in larger doses. With this exception, there are excellent waters representative of each class, and it only remains for the ordinary practitioner to obtain the necessary information to direct his patients aright. Few American physicians appreciate the value of mineral waters, and hence the springs are only very slowly coming before the public notice. Most of the important springs have now been so improved that attractive and comfortable accommodations may be offered the patient.—Medical News.

A DIETRY FOR DYSTOCIA

The Medical Age alludes editorially to a diatetic regimen prescribed by Prochownik for women who have narrow pelves or abnormally large fetuses. His plan is only to be followed during the last three months of pregnancy and is as follows: It includes roast and boiled meats, without sauces, fish, green vegetables, salads, cheese, butter, and bread in small quantity. As beverages about 300 gram of light wine are allowed, but no water. Soups, potatoes, farinaceous foods and beer are proscribed, and sugar is replaced by saccharin. This dietary was tried by Prochownik in three cases of women who had been obliged to resort to premature delivery, and it gave complete success—that is to say, the children which were delivered at term were slender and graceful and their ulterior development proceeded normally.

A German physician who has tried this method during the last two years asserts that the children come into the world small and thin, and depleted of fatty tissue. The passage of the pelvic strait is easily accomplished, always more easily than in ordinary conditions. The regimen is one which, it is averred, can be tried without danger to the mother, and the ulterior development of the child goes on normally.

PARANEPHRITIC HEMATIC CYST

Shortly after marked purgation a young woman presented signs of illness which led to the diagnosis of perforative appendicitis. The patient was seen by M. Walther (La Presse Med., May 3, 1902), who preferred to regard the case as one of internal hemorrhage. Examination under chloroform revealed the presence of a large tumor in the right flank, close to the normal site of the kidney. Lumbar incision exposed a huge hematic cyst occupying almost the entire lumbar region; the contents included over a quart of liquid blood and some large clots. This cyst was situated above the upper pole of the kidney, the latter being crowded downward and backward. There was no fresh hemorrhage at the time of the operation. The wound was drained and recovery followed without complications. Microscopically the wall of the cyst was found to consist of fibroconnective tissue without a trace of epithelium; hence the cyst was probably paranephritic and not a cyst of the suprarenal body. The pathogenesis of the case remains obscure. There was nothing in the history to lead to the diagnosis of traumatic hematoma.

SULPHUR CREAM FOR DANDRUFF

Dr. Geo. T. Jackson says the following will make an elegant sulphur ointment, which he uses extensively in the treatment of dandruff:

White wax, ʒ iiss.
Ol. petrolati, ℥ iiss.
Rose water, ℥ j.
Sod. biborate, gr. xv.
Precipitated sulphur, ʒ iiss.

This is an elegant, smooth, white preparation without sulphur odor. It keeps perfectly, does not separate, and is as perfect an ointment as can be. Dr. Jackson has tried on his scalp all sorts of lotions in the treatment of seborrheal dermatitis, and invariably comes back to the sulphur cream with pleasure and profit. Used once or twice a week, it keeps the scalp comfortable, does not make the hair too greasy, when properly applied, and checks the dandruff.—Journal Cutaneous and Genito-Urinary Diseases.

HEMOPTYSIS

Tuberculous hemoptysis sometimes proves so stubborn that the ordinary treatment will not prove efficient. Lemoine, as noted in St. Louis Med. Rev., states that hemoptysis without fever is, as a rule, less grave. He recommends absolute rest; horizontal position with the head slightly elevated; warm foot-baths; active purgatives to bring the blood to the abdomen and extremities. Sinapisms to the apices and bases of the lungs, oft repeated, aid revulsion. Internally he administers quinine and ergot. Alcohol should be discarded. In febrile hemoptysis ergot is not always indicated. The following combination is recommended:

℞ Pulv. ipecac, gr. xxx.
Syr. ipecac, ʒ x.
Syr. aurantii, ℥ iij.

M. Sig. One dessert-spoonful every two hours until slightly nauseated.—Jour. Amer. Med. Asso.

IODIDES IN ARTERIO-SCLEROSIS

Jodlbauer holds that the beneficial effects of the iodides in arterio-sclerosis cannot be due to its power as an absorbent. In many cases improvement is much too rapid. Neither does he accept the suggestion of Schonfeldt that the specific iodide action depends on increased lymph flow. Jodlbauer thinks that the beneficial action is due to the dilating effects of iodides on the peripheral circulation. It has been shown that when the arterial tension is very high, the amount of blood expelled at each systole is reduced. If the pressure be reduced this stagnation is relieved, the cardiac contraction is more efficient, and blood current and lymphatic circulation are improved. In this way the cardiac muscle and tissues generally are better nourished.—Munchen. med. Wchnschr., 1902, No. 16.

PERSPIRING FEET

The following rules have been laid down to prevent excessive perspiration of the feet. Wear low shoes, wool stockings, and dust the feet over twice a day with iodol. The following may be used as a wash:

℞ Liq. plumbi diacet.
Acidi carbol., aa ʒ ij.
Aq., q. s. ad ℥ ij.

M. Sig.: One tablespoonful to be mixed with a pint of warm water and wash the feet every morning and dry with a soft towel.—Jour. A. M. A.

METHYLENE BLUE IN TREATMENT OF MALARIA

Dr. M. Dunn states that there is no remedy equal to methylene blue in cutting short malarial fever. He prescribes it as follows:

℞ Methylene blue,
Quininæ sulph., gr. ij.
Ferri carbonatis, gr. j.
Acidi Arsenosi, gr. 1-50.

M. Ft. capsulæ No. j. One such capsule every three hours.—Jour. A. M. A.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. J. F. Dustin has located at Hudson, S. D.

Dr. J. T. Brown, of Lexington, Ky., has located in Missoula, Mont.

Dr. Edmond Latonde, of Eden Valley, has removed to Brainerd, Minn.

Dr. C. H. Cogswell, Jr., of Cedar Rapids, has moved to Mason City, Iowa.

Dr. Guy V. Murphy, of Minneapolis, has located in Eden Valley, Minn.

Dr. J. G. Parsons, of Brookings, S. D., is in Boston taking a special course in eye and ear work.

Dr. A. J. Moe, of Wisconsin, has become a partner of Dr. F. R. Hansen, of Heron Lake, Minn.

Dr. George A. Stevenson, of Albert Lea, Minn., has returned from the East where he has been taking a special course in eye, ear, nose and throat work.

Dr. R. H. Hardman, of South Bend, Ind., a graduate of the National Medical College, of Washington, D. C., class of '97, has located at White Earth, N. D.

Dr. E. T. Reeve, of Elbow Lake, Minn., who has been attending lectures in New York City, is at home.

Dr. J. O. Brown, who has practiced in Minnewaukan, N. D., for the past eighteen years, died last month.

Dr. N. J. Shields, of Lidgerwood, N. D., has plans for a new hospital building, which he will erect at once.

Dr. E. P. Case, who has had charge of the Waterville (Minn.) Sanitarium, is going to California to reside.

Dr. J. H. Healy, who has been practicing for some years at Graceville, Minn., is now located at Wheaton, Minn.

Dr. M. G. Hinkle, of Seattle, died last month of typhoid fever. Dr. Hinkle was a graduate of Jefferson, class of '96.

Dr. E. C. Miller, of Brookings, S. D., is in Chicago taking a special course in medicine, and visiting the hospitals.

Dr. Emilie Maris, who has just graduated from the College of Physicians and Surgeons, Chicago, will practise in Duluth.

Dr. F. W. Lloyd, formerly of Lehigh, Iowa, and Dr. J. F. Speed, formerly of Louisville, Ky., are now located at Ft. Dodge, Iowa.

Dr. Moses Rockman, of Missoula, Mont., died last month. Dr. Rockman was a graduate of Cooper Medical College, of San Francisco.

Dr. S. C. Brown, of Clinton, Minn., is pushing his hospital enterprise with great energy, and he will soon be able to begin work in a building.

Dr. Wm. Edwards, of Bowdle, S. D., ex-secretary of the S. D. State Medical Society, is doing special work in general medicine at the Chicago Policlinic and Hospital.

Dr. M. B. Smith recently completed the first brick dwelling house erected in Lake Park, Minn., and the other day, just as it was completed, it was destroyed by fire.

The eleventh annual meeting of the Southern Minnesota Medical Association was held at Owatonna last month. The following officers were elected for the ensuing year: President, Dr. J. P. Waste, of Plainview; vice-president, Dr. D. A. Pritchard, of Winona; treasurer and secretary, Dr. W. T. Adams, of Elgin. The next annual meeting will be held at Winona, in August, 1903.

FOR SALE

My practice in a village of 1,500 inhabitants about 50 miles from Minneapolis and St. Paul, in the best part of Minnesota. Practice will pay the right man $3,000. Reason for selling is ill health. Practice, including team, buggies, etc., $600. Address M., care of N. W. Lancet, Minneapolis.

NORTHWESTERN LANCET

A Semimonthly Medical Journal

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A SAFE MILK-SUPPLY*

By H. M. Bracken, M. D.

Secretary Minnesota State Board of Health

MINNEAPOLIS

A public supply is a public danger. This is a recognized fact applicable to milk as well as to other commodities. Private supervision has been surrendered. On the other hand, a public supply can easily be made a public safeguard, if for private supervision can be substituted expert oversight as the dangers involved demand. In this way a whole community may secure results far superior to any within the reach of a single individual or family.

At this time I assume that all will concede the danger of transmission of tuberculosis from the cow to human beings through the medium of infected milk; also, that the milk may be a means of transmitting tuberculosis from an infected cow, even though the udder is not involved. Such being the case, the question naturally arises, How can the public be supplied with milk known to be free from tuberculous infection? The answer must be, by securing milk from a source entirely free from infection, i. e., from non-tuberculous cows; or, by so treating the milk as to destroy any tubercle-bacilli that may be present. Both of these methods are practical if placed under the supervision of reliable parties.

To carry out the first it is absolutely necessary that all cows furnishing milk for a given supply must be free from tuberculosis. This can be determined by means of the tuberculin-test, applied to all cattle before their introduction into a dairy herd, and, in addition, the testing of such dairy herds, from time to time, to guard against the accidental introduction of the disease into a certified herd. This should secure and maintain a safe milk-supply, so far as bovine tuberculosis is concerned. But this plan will not secure a non-tuberculous milk-supply for the entire population of a great city unless all the dairies furnishing milk to such a city are under strict and constant supervision.

Certain municipalities have adopted the plan of visiting dairy herds, from time to time, with a corps of inspectors, who test all the cattle in the dairy at the time with tuberculin. They thus exercise no restraining influence upon the use of possibly tuberculous cows that may afterwards be brought into the herd, until the next date of inspection, which may not take place for a period of even two years. This latter plan is imperfect and therefore dangerous, since it conveys to those who are not thoroughly familiar with the facts a sense of safety which does not exist. For example, let us assume that Mr. A. has his dairy, consisting of one hundred milch cows, tested with tuberculin Oct. 1, 1902, and that of this herd ten cows give a reaction to the test. These ten cows are presumably cut out of the herd at once, and are no longer used by the dairyman. It is natural to suppose that his customers have been using all the milk from his dairy up to the time the test was made. With ten cows cut out of his herd it bcomes necessary for him to purchase at once others to take their place. If there is no provision that he must use only tested cattle in his dairy herd, he can proceed at once to the common dairy market and purchase cows that have never been subjected to the tuberculin-test to replace those of his herd already condemned. The newly purchased cows may be as badly diseased as those condemned; yet no one will know of the fact until the inspectors put in their appearance again, from six months to two years later, according to the amount of testing required of them. Still further: Cows are constantly becoming farrow; the dairyman is disposing of these, and replacing them with untested cows; two years hence his herd tested Oct. 1, 1902, may not contain more than twenty-five of the original one hundred animals, the other seventy-five having been purchased during this period to replace the condemned and farrow cows, which have been disposed of.

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*Read before the Hennepin County Medical Society, Minneapolis, Sept. 1, 1902.

This plan of trying to secure a non-tuberculous herd of dairy cattle by the occasional testing of the animals with tuberculin, without any restriction upon the purchase of new animals, is impracticable so far as a large city is concerned, because the territory to be governed by inspection is too large for the inspection of any municipality to control. It should only be referred to to be condemned when it is alone relied upon.

One means of securing a safe milk-supply so far as the bacillus tuberculosis is concerned is by commercial pasteurization. Of this method Prof. H. L. Russell, of the University of Wisconsin, speaks as follows:

"Finally it must be noted that whatever danger exists (from tubercle-bacilli) may be wholly removed by the proper pasteurization of milk. If milk is treated in a closed receptacle under conditions that prevent the formation of a surface pellicle (so-called scalded milk) to a temperature of 60°C. (140°F.) for fifteen or twenty minutes this period is amply sufficient to destroy the vitality of the tubercle-bacillus. * * * Milk or cream handled in this way is not changed in taste or appearances; in fact, cream rises as readily on it as on raw milk. Where the heating takes place in an open vat or vessel under conditions permitting of the formation of the scalded layer the vitality of the organism is retained for much longer periods of time. As these conditions are much more likely to prevail where milk is treated in a small way, as in the family, than where pasteurization is on a commercial scale in tightly closed rotating machines, as are mainly used here in this country, this caution should be especially emphasized in public health work. All that is needed is sufficiently tight closure to prevent the formation of the coagulated material either on the surface or in the milk. In this material the organism seems to be protected from the heat.

"Pasteurized milk will have its keeping qualities enhanced about two, three, or four days, depending upon how it is handled subsequent to being pasteurized. If pasteurization was carried out in the city dairies this would result in the complete annihilation of all pathogenic organisms and particularly tubercle-bacilli."

The commercial pasteurization of milk can be made to supply an entire city population with milk free from tuberculous infection, and this can be said of no other plan so far known. Undoubtedly some will argue that an unheated milk is superior to any form of pasteurized milk. This is not proven, but granting as much for argument's sake, and recognizing the impossibility of supplying a city of any considerable size with a safe milk-supply on any other plan, it would then seem that a combination of the first and second plans set forth—viz., the sale of raw milk only from dairies that are under rigid inspection, where the cows have stood the tuberculin-test, and the sale of commercially pasteurized milk—should be used in every city of any considerable size. On the other hand, the first plan might be depended upon in small cities and villages when the milk-supply is taken from a small and easily inspected district.

But there is more than possible infection from tuberculosis that must be considered in connection with our milk-supplies. If we study infant-mortality statistics we shall find that the deaths due to impure milk far exceed those due to milk possibly containing tubercle-bacilli. A large part of the commercial milk is loaded with filth and bacteria. C. Baron, of Dresden, estimated that there were consumed annually in that city about 2,200 pounds of cow excrement with its milk-supply. Park, in reporting upon the milk-supply of New York city, gives the number of bacteria in ten samples of milk collected late in March as ranging from 35,200,000 per c. c. to 135,000 per c.c., the average being about 6,000,000 per c.c. London milk is represented as containing over 3,000,000 bacteria per c.c. Such conditions are unnecessary, for a table from this same article shows that milk taken under reasonable conditions of cleanliness from six individual cows averaged but 6,000 bacteria per c.c. five hours after milking; the lowest of these six showing but 400 bacteria per c.c. The temporary bactericidal action of milk, together with the later great increase of bacteria, is shown in the following: From six individual cows the average number of bacteria per c.c. was—

(1) Five hours after milking	6,000
(2) Twenty-four hours after milking	1,933
(3) Forty-eight hours after milking	17,816

Six samples taken from the entire herd gave the following results for bacteria per c.c.:

(1) Five hours after milking	4,333
(2) Twenty-four hours after milking	2,766
(3) Forty-eight hours after milking	10,583
(4) Seventy-two hours after milking	329,000

Other statistics might be quoted showing the condition of ordinary city milk as to bacteria present. The Philadelphia Pediatric Society appointed a commission to secure a safe milk-supply. Its work has been highly satisfactory. It established the limit of 10,000 bacteria per c.c.

If milk is collected and bottled under cleanly conditions and kept at a reasonably low temperature, its keeping quality and food value are greatly enhanced. A noted dairy near Chicago, where milk is collected along lines similar to those suggested in this paper, sent its products to the Paris Exposition. The milk and cream were seventeen days in transit, and were in perfect condition when they reached Paris. The first acidity of this milk was detected the twenty-first day after it was bottled. No preservative was used. Its keeping quality was due entirely to the conditions of cleanliness under which it was collected and the temperature at which it was kept. The milk from this dairy is sold in Chicago as "certified milk," and the dairyman attributes his success in finding a market for his milk to the physicians of that city, who appreciate the importance of pure milk for their own and their clients' families.

Dr. S. D. Brimhall and myself prepared certain rules and regulations to be submitted to the State Board of Health for approval, looking to the granting of a special certificate to dairymen who may be willing to place themselves under the inspection of said board. These suggested rules and regulations are by no means too stringent if we are to have a satisfactory milk-supply. They are as follows:

(1) Only cows that have been subjected to the tuberculin-test, and are thus shown to be free from tuberculosis, shall be permitted in the dairy barns of dairymen holding the special health certificate from the Minnesota State Board of Health.

(2) All cattle that have given a single reaction to the tuberculin-test must be eliminated from the herd before the granting of the special health certificate above referred to.

(3) The testing of cattle to be used in dairies holding this special health certificate must be carried out by veterinarians specially appointed by the Minnesota State Board of Health. Cattle must be tested at the owner's expense.

(4) Every precaution must be taken to keep the cattle clean at all times. Special attention must be given to the cleanliness of the belly, flanks, tail, and udder immediately before the milking is begun. Wet milking will not be tolerated.

(5) The stable must be well built, well lighted, well ventilated, and well drained, dry and clean, and must be kept in such sanitary conditions as to meet the requirements of the Minnesota State Board of Health.

(6) Milk must not be used from any cow which is not to all appearances in perfect health.

(7) Milkers must wash their hands in clean water with soap, and must put on a clean suit or over-dress, before milking. The hands must be kept dry while milking.

(8) Pails, cans and strainers must be cleaned after use, first in luke-warm water, and then sterilized by means of boiling water or steam.

After being thoroughly cleaned, the pails, cans, and pans must be turned upside down in some place set apart for such purpose, free from dust or probable contamination. Strainers must receive special attention, both in their cleansing and care, in order that they may be almost or quite germ-free.

Strainer cloths must be destroyed or washed clean and then thoroughly boiled after each using.

(9) Milk must be cooled as quickly as possible to 45°F., or less, by passing it over or through a modern cooler. It should then be placed in cool pans or bottles, and kept in a cool place in a house entirely separate from the stable and especially designed for this purpose.

(10) The use of milk-preservatives is absolutely prohibited.

(11) The milk-wagons must be kept clean and neat throughout at all times. Cans or bottles used in the distribution of milk must be cared for as other milk utensils under Rule 8.

(12) Water used for cleansing the pails, pans, cans, and bottles, and for all other purposes in connection with the collection and care of milk, must be from a source free from all possible contamination. The well supplying the water must not be located in the barn-yard, nor near privy vaults or cess-pools or other possible source of contamination, for in such a location it is quite impossible to protect its contents from contamination. Water from deep wells, or still better, water that has been boiled, is the safest for use in connection with the dairy.

(13) INFECTIOUS DISEASES: Milk is a ready vehicle for the transportation of infectious diseases; such as diphtheria, scarlet fever, smallpox, etc. Individuals who are associating with patients ill with any of these diseases, must not be permitted to have anything to do with the milking of cows where the milk or its products are to be marketed.

Typhoid fever is also readily transmitted by milk, but the infection in this case is usually through the use of infected water in the cleaning of the milk-utensils or from uncleanly milkers.

Tuberculous individuals, or those having the care of tuberculous patients, must not be allowed to collect or have the care of milk, or to work in the dairy in any capacity whatever.

Such regulations can guarantee a safe milk-supply from the certified herds, but this plan cannot possibly be enforced by any large city for its entire milk-supply unless all its milk is secured from dairies under its strict supervision, i. e., within the city limts,—an absolutely impossible proposition.

From this presentation of facts we are warranted in drawing the following conclusions:

(1) To secure a safe milk-supply it is necessary that milk should be collected and cared for under strict sanitary regulations. The milk should be controlled by such regulations from the time it leaves the cow until it reaches the consumer.

(2) Only cows that have been tested with tuberculin, and thus shown to be free from tuberculosis, should be permitted in dairy herds.

(3) It is impractical to attempt to secure a pure milk-supply by the occasional testing of dairy herds with tuberculin, with no restrictions upon the herds during the intervals between testings.

(4) All milk that is not handled under the most rigid sanitary regulations from the time of its collection until it has reached the consumer, should be pasteurized.

(5) The commercial pasteurization of milk is a practical means by which to secure a safe milk-supply for large cities, for by this means the filth which careless milkers have allowed to enter the milk is removed, and the dangers from the various pathogenic bacteria which may be present is reduced to a minimum.

(6) Pasteurization, while a fair commercial make-shift, is but a poor substitute for cleanliness as a means of securing a safe milk-supply.

DISCUSSION

DR. HENRY HUTCHINSON: For a long time I have felt a deep interest in the subject of pure milk. In a large measure this interest is due to the fact that, in a general practice in a large city, the necessity for a supply of this necessary fluid is constant, and the inability to obtain it in a pure state for children and infants has always confronted me. My interest in the subject has lately been stimulated and intensified by the discussions it has aroused in our State Board of Health, of which I have the honor of being a member, so that when your courteous invitation to be present at this meeting this evening was received and I learned that the executive officer of our board would read a paper on "A Safe Milk-Supply," I was very glad indeed to be present. Knowing that Dr. Bracken would treat the subject mainly from a bacteriological and scientific standpoint, referring more especially to the tubercular aspect of the subject, I have thought best to confine my remarks in the main to the obtaining of pure, clean milk, and I offer such suggestion as seem to me to have a practical bearing upon this phase of this subject.

If one knows anything concerning the usual manner in which cow's milk is ordinarily obtained, he will marvel when he enters the stables of a millionaire gentleman-farmer and sees tiled walls and stalls, cement floors, and running water at hand; and he will marvel still more at the sight of the cows groomed from head to foot, and shining like thoroughbreds ready for the stock show. Such a sight is almost absolutely foreign to most of us, though we may be familiar enough with the ordinary dairies to be seen in and about the Twin Cities, and no doubt such ideal conditions as I have just described should not be expected in the average dairy. But there is no doubt in my mind that much can be done to improve the sanitary condition of these dairies by calling the attention of the public to the lamentably unsanitary, not to say filthy, conditions under which nearly all of our milk is produced. Milk is, perhaps, the most delicate food-stuff supplied to our tables. It is the staple of the bottle-fed infant. How many mothers are there who would complacently give cow's milk to their offspring could they follow it step by step from the cow to the nursery? No food that comes upon our tables is perhaps obtained under filthier conditions and within dirtier surroundings than the cow's milk that daily comes to us. That this condition exists is certainly an illustration of "everybody's business being nobody's business."

A manufacturer of condensed milk was the first to find it to his interest to improve the milk-supply. He bought his milk from the surrounding farmers and employed a milk or dairy inspector, and actually compelled the farmers to sign a contract, under penalty, to do certain things. Cows with swollen udders and fevered could supply no milk to the condensary. Such milk could be disposed of to the residents of the city or town, but was not good enough for condensing. Cows having recently calved could not be milked for condensing purposes. Such milk must be sold to the ordinary consumer. Stagnant waters on the farms must be fenced in, and only pure water used for drinking. Brewer's grains from the mash-tub and corn ensilage were prohibited, the latter, not because it was unsuitable, but because it was often carelessly and badly prepared. The milk-condensing people argued that such feed made milk that quickly fermented. Stables were to be kept reasonably clean and the walls and ceilings whitewashed so many times a year. Milk utensils were to be cleansed, first with cold water and then scalded and put in the sun. After milking, the filled cans were to be put into spring-water or ice-water, and stirred until reduced to a temperature of 45° F., thus quickly insuring the expulsion of animal heat. The carrying of the milk to the condensary must be done on spring-wagons, and the cans must be covered with tarpaulin to protect the milk from the sun's rays. These were some of the regulations laid down by the condenser of milk to the producer, a few years ago; but the farmer who brought milk to the city to be used in a fresh state, signed no such contract and was bound by no such rules, nor is he now. If the brewer's grains or ensilage, however poorly made, cause an abundant flow of milk, that is what is wanted. Whteher a cow is ill or has just calved cuts no figure with many in the milking; it all goes to market at so much per quart.

Milking time comes early—only too early in the morning for the sleepy farm-hand. The poorly bedded cow, her hide, tail, and udder reeking with adherent manure and urine, stands for milking. The open-mouthed pail—alas! too open—receives many other things than pure milk from the teats. The fact that the teats and udder are manure-defiled interferes not with the milking process. The fact that the stable reeks with stale urine and manure cuts no important figure, and is no reason why open cans of milk should not stand around exposed. The milk is strained only once through the strainer of the milk-pail nozzle, and it is ready for use. Whether the milking utensils were scoured and scalded and sun-dried is not inquired into.

It may be conceded that the average dairy pays very little heed to any of the foregoing finicky questions in connection with the caring for milk; yet the problem of supplying pure milk—sanitary milk—is not beyond solution. Let one dairy start in. Let the manager select his cows, and keep his herd under inspection. Let him look well to the purity of the water given the cattle for drink, because of milk 88 per cent is water. Horse-pond, surface water cannot make good milk. Let him look well to the feed, avoiding sour grains or mash, or badly prepared ensilage, or any form of food that will create excessive fermentation in the stomach. When a cow has calved, let the milk from that cow be used for the calf until it becomes normal, whether it be one or two weeks after the birth of the calf. Milk from a cow at and for a time after giving birth to her calf, fed to a young infant is always liable to induce serious bowel disturbance. If a cow be sick from any cause, if in a fevered condition, or if the udder be inflamed, such conditions should prevent that cow's milk being sold. The stables should be clean and sanitary in every way. It certainly is just as necessary to keep a cow's stable tidy as it is that of a carriage-horse—obviously more so; for a horse is groomed, but how seldom is the caked manure from the hide and bag of the cow removed? How often are the teats washed and wiped before milking? All this should be done. The stable should be whitewashed frequently, and thoroughly flushed every day. The process of milking should be a clean one, and the operator should not be callous to the fact that manure, as well as milk, can drop into his milk-pail.

As to the utensils—nothing can be too sweet and clean in the line of milk receptacles: and when they are once thoroughly cleansed, the sun and air should do the rest. Now, let us assume that the conscientious dairyman has done all these things; yet there is one more thing to be done. The milk after being cooled by spring- or ice-water needs one more process before going to market. It must now be purified, not by ordinary straining, because this will not purify milk. The well-equipped dairy should pass every drop of milk through a separator. This machine, by means of centrifugal force, not only separates the milk from the cream, but it also separates the foreign matter from the milk—particles of manure and dust and dirt of all kinds that fly about the stable, however careful the farmer may be. This residue remains in the machine after the milk has passed through. To illustrate the necessity for this last cleansing process, dairies known for their "cleanliness" have supplied milk for a purifying-test and after the milk has passed through the separating machine, the residue left in the machine in the form of manure, hair, blood, pus, and many other things that float in the air of a stable, has been far from appetizing. Therefore, in addition to cleanliness and care of every kind in and around a dairy, the milk should, as a final treatment, be passed through a separating machine, the skim-milk and cream-nozzles honestly leading back into one and the same receptacle.

What the bacteriological test would show comparatively between ordinary milk and milk purified as above, remains to be told. Two bottles of milk from the same dairy, one ordinarily clean, the other purified by the centrifugal separator, both put away in an ice-box, will illustrate the value of the process. After the ordinary milk has soured and spoiled, the purified milk will remain sweet and fresh for days. If the physicians of this or any other city would stand ready to endorse and prescribe such purified milk, a progressive dairyman would find no difficulty, I believe, in securing a market for his purified milk at a price considerably in advance of that secured by other dairies. For nursery purposes alone I believe the demand would consume the supply from a large dairy.

The producing of clean milk has been too sadly neglected. We shut our eyes and drink what the dairyman brings us, and yet if we followed the product from its source to the table, we would, in many instances, drink something else. People as a rule will buy clean food, if they can get it, in preference to the other kind, and they will pay an advanced price for the same. Milk certainly is not produced to-day as it should be. There is a crying need for reform. No one in my opinion is better situated to bring about this reform than the physician whose word with his patients is law and whose advice is followed because it costs money. Let one large dairy produce sanitary milk, and the rest must follow or find their patronage slipping away from them. The endorsement of a sanitary dairy by the physicians of St. Paul and Minneapolis would mean an overwhelming business for that dairy and an improvement of the other dairies. It would be putting a premium on cleanliness; and any class of men, who can bring about that condition in the dairy business, will be conferring an inestimable boon upon the people.

Dr. Thomas S. Roberts: This is a subject in which I am, in common, I hope, with all general practitioners, greatly interested. I wish to thank Dr. Bracken for bringing this highly important matter before us, and we are all, I am sure, appreciative of, and indebted to him for, the practical, vigorous, and helpful way in which he has accomplished it.

Preventive medicine is to-day rapidly assuming the paramount importance that it deserves, and there are certainly few preventive measures of greater importance in large cities than the maintenance of a clean milk-supply. Yet how little general attention has thus far been given to it, and in consequence what a vast army of infants go annually into needless graves, to say nothing of the great suffering and other evils entailed. Before taking further part in the discussion I would like to ask Dr. Bracken whether it is the intention of the State Board of Health to lend its influence and assistance in establishing and maintaining in our city a "certified milk" supply, in the full sense in which that term is used in Eastern cities, where for several years the necessary procedures have been in operation with satisfactory results. If Dr. Bracken will kindly answer at this point it may assist greatly in the further consideration of the subject.

(Dr. Bracken replied that it was the intention of the State Board to do all in its power to help furnish Minneapolis, as well as other cities of the state that might take action in the matter, with a milk-supply that should meet all the requirements of "certified milk" as it is furnished in Philadelphia, New York, Boston, and elsewhere.)

This being the case, the subject presents a much broader scope than outlined in the paper and at least one additional important consideration not referred to, viz., the securing and maintaining a prescribed standard-percentage composition in the milk and cream so far as its chief constituents are concerned, and also freedom from various deleterious substances which may be added for the purpose of coloring, preserving, or thickening the milk and cream. This, in cities like Philadelphia, Newark, and New York, where an officially appointed commission has taken charge of the matter of "certified milk," means not only a clean milk from healthy, selected cows, but also a pure milk with fat, proteid, and milk-sugar present in amounts that may vary only within certain established and required limitations.

With properly selected and mixed herds, and intelligent care, the three or four dairymen that availed themselves of the offer of the Milk Commission of the Philadelphia Pediatric Society, did not experience great difficulty in attaining and maintaining the required percentage of fat (3.5 to 5 per cent), proteid (3.5 to 4.5 per cent), sugar (4 to 5 per cent) and the specified sp. gr. (1.029 to 1.034), and reaction (neutral or very faintly acid). The cream furnished must have the fat percentage stated, and must not vary more than one per cent from the figure given. Those of us who are daily struggling with the perplexities and uncertainties attending the home modification of milk for infant-feeding, especially when it is desired to secure definite percentage modification, would fully appreciate, and hail with keen satisfaction, a milk-supply of such standard character.

But these same Philadelphia dairymen experienced great and constant difficulty in producing a milk that would pass the bacteriological test—that there should not be over ten thousand bacteria to the c. c. At times the count fell far below the limit, while now and then, for known or unknown reasons, it would run far over, even to one-hundred thousand to the c. c. During these latter periods the certificate labels would be withdrawn by the Commission to be returned again when the milk "passed." The New York standard allows the contamination of thirty thousand bacteria to the c. c. It is practically impossible to get milk free from bacteria of some kind, and this fact is recognized by the seemingly high figures allowed by the various commissions.

Rotch of Boston long ago demonstrated that even when the milking is done with all the aseptic and antiseptic precautions of a careful surgical procedure the milk will contain numerous bacteria, unless the first portion be discarded, due to the fact that the teats and milk-ducts are invaded by organisms which are washed out with the first milk drawn. But a certain amount of contamination introduced in this way, is not altogether inconsistent with a safe milk, and must practically be permitted. The safe limit cannot, however, be greatly transcended, and right here lies the vital consideration and great difficulty in securing a clean milk. The conditions attending the collecting of the milk, and the manner in which the milk is handled from that time until it reaches the consumer, determine the result as to bacterial cleanliness and too frequently determine as well the health or ill health—it may be the life or death—of the infant that drinks it. It is therefore in the collection and handling of the milk that the dairymen who would produce a normal clean milk, must make the greatest efforts, and it is in this direction also that "certified milk" commissions, whose functions are largely educational, have found it necessary to direct their most active and careful efforts.

If I should criticise in any way Dr. Bracken's paper, it would be to suggest that with the title, as it stands, it would be more appropriate to devote more space to the safe method of collecting and handling milk, instead of giving so great prominence to the much less vital question,—the contamination of milk with tubercle-bacilli from tuberculous cattle. True it is, that all cows should be tuberculin-tested, and all herds kept free from tuberculous cattle, for we want no milk from diseased cattle or unhealthy animals, whether it be from tuberculosis or any other malady. But it is coming to be recognized, if I mistake not, that the danger of infection with tuberculosis from milk from tuberculous cattle is not so very great after all, and certain it is that the danger to an infant of fatal poisoning, due to the contamination of milk from sources outside the cow, combined with improper handling of the milk, is ten-thousand-fold greater.

Dr. Bracken's suggestion that we must depend upon pasteurization on a large scale for the purification of the general milk-supply under the present conditions may be true, but it is a procedure fraught with danger. It must be borne in mind that pasteurization of poor, stale milk, in which countless millions of bacteria have been propagated, does not make it a good food, and no known procedure will get rid of the toxins that have been produced in such milk, and make it a safe article of diet.

In closing I should like once more to emphasize the great importance of this question, and express the pleasure and satisfaction that I feel in having it brought forward thus prominently by the essayist of the evening. It is not too extravagant to say that there is no medical or surgical question that could be brought before this society for discussion that is of more practical importance and value to this community than this matter of a safe milk-supply. The force of this statement is apparent when due consideration is given to the results of recent investigations into the causes of intestinal diseases among infants and young children in connection with the appalling record that more than half of the children that die under two years of age, fall victims to these preventable milk-produced microbic diseases.

Dr. W. E. Leonard: In response to a call from the chair, Dr. Leonard, Medical Inspector of the Minneapolis Health Department, spoke as follows:

I most heartily endorse the suggestions of the essayists looking towards a safe milk-supply, and I cannot add anything of more force to their arguments for the necessity of such supply. I would, however, call your attention again to the fact familiar to all medical men that milk is a most susceptible fluid, and a ready conveyor of other contagion than tuberculosis. My work in the Health Department gives me opportunity to observe along this line.

We are just now puzzled over a striking instance of the way in which milk may convey the germs of diphtheria. A dairyman whose dairy out in the county has been for years a model in every way, and who supplies over 150 families in one of the best quarters of the town, suddenly seemed to have a train of cases of diphtheria along his route. These increased until they began coming in four or five daily, when the department began investigation. The dairy inspector and our veterinarian could find no fault with the farm or its cleanliness. I was sent to get samples of the water-supply, and to take tests of the throats of the family. No one complained of being sick, or knew that they were in any way out of order, nor had there been any sickness on the place for months. However, the specific bacteria of diphtheria were found in the throats of a young woman living at the house and of the man who distributed the milk on the wagon. On analysis the milk itself and the water were found to be pure. These two infected persons were immediately isolated, the house and stables were thoroughly fumigated, the udders of the cattle carefully washed in a disinfectant solution, and the cats about the place killed. The apparent contagion stopped, and no new cases developed. The young woman left the farm entirely on being pronounced free of germs, and the man went back upon the wagon. Some two months later there again arose a series of cases along the same route, and again the distributor of the milk was found to have germs in his throat. He is now again in isolation, and cases have stopped coming in in that locality.

Why this healthy man should be so affected is certainly unusual, although not without precedent. The milk evidently was the medium of contagion to more than three score cases within three months.

The subject of a pure milk-supply is one of vital importance to every person in the community.

Dr. C. A. Kelsey: The able paper of Dr. Bracken brings before us a question of vital importance to all citizens. As physicians we know too well that the present milk-supply, with few exceptions, is filthy and loaded with disease-producing germs. Is there a remedy? Can reforms in the milk business be accomplished which will put clean, pure milk within the reach of our people? If so, it is the duty of our society to give this our careful and earnest consideration. It is a broad and many-sided question, involving healthy cows, proper pasturage, cleanliness of barns, and of milking, care and delivery of milk, etc.

The most careful inspection of dairies and the destruction of tubercular-affected cows is at best only a partial remedy. The replenishing of the dairies from tested cows will help, but unless conditions are favorable to health, new cases will develop and we shall be supplied with milk from diseased cows for several months before the inspector makes his next regular visit. Proper range in good pastures is necessary for the continuance of good health, and the sooner our dairies are removed from the small and crowded farms near the city to more roomy surroundings the better it will be for the consumers of milk. Ex-Gov. Hurd of Wisconsin and others have found that confinement of cows in barns, no matter how elaborate and complete in their arrangement, predisposes to the development of tuberculosis. No amount of skill and care in selecting diet prevents this unfortunate result. The cramped condition of our dairies in filthy yards and worse barns is responsible for much of the disease caused by the use of milk. The delivery of clean, pure milk to scattering customers at an increased cost will be but a partial remedy, as it would put it out of the reach of the masses, and milk loaded with tubercular, cholera infantum, and other disease-producing germs, would continue to be supplied, and our innocent, helpless babes and children, whose lives might be saved, will continue to be sacrificed, and adults will suffer from the use of impure milk.

Milk, being the natural food of babes and small children, as well as an important element in the food at all ages, demands the most earnest efforts of our society to bring about such reforms in dairies and the milk business as to place clean, pure milk within the reach of all.

In order to do this the business must be consolidated so that an intelligent supervision may be exercised. We need a consolidation of our dairymen into an organization in which each individual would subscribe to uniform regulations, embracing the careful selection of healthy cows, frequent inspection, care and intelligence in the selection of food, construction of barns, and cleanliness of barns, in milking, and in delivering. By such a combination a saving in bringing to market and delivering could be made that would perhaps cover the cost of running the milk through separators, which would remove all dirt, and pasteurization, which would destroy all disease-producing germs, so that clean, pure milk could be delivered without increased cost to consumers.

To aid in the bringing about of this much-to-be-desired result is the plain duty of every member of the medical profession, and Dr. Bracken and our society will earn the gratitude of the present and future generations for his paper, and the action taken by our society at this meeting.

Dr. P. M. Hall: None can take more interest in a safe milk-supply than public health officials. City health departments, through their milk inspections, stand between the dairyman and the consumer. They are constantly inspecting cows and milk,—not only an occasional inspection, but inspection every day, every week, every month in the year. These inspections are made to determine the presence or absence of preservatives, to determine the relative cleanliness of the milk, and also to determine the percentage of butter-fat and the amount of possible adulteration.

Nearly every large city in the country is at the present time inspecting dairy herds, which are furnishing milk to their respective cities, for the presence or absence of bovine tuberculosis. The method of this inspection, as carried on in St. Paul and Minneapolis, is identical with that carried on in every city of the United States at the present time. Too much attention has been given to the benefits of such inspection to be obtained by the consumer, losing sight of the fact that the early diagnosis of bovine tuberculosis, and the early removal of diseased animals from the herd, thus preventing the spread of contagion to healthy animals, are a positive and direct benefit to the dairymen. We are too apt to think that the dairymen, in submitting their cattle to the tuberculin-test, are thereby making a great sacrifice for the benefit of the milk-consuming public, when, as a matter of fact, they are being benefited fully as much as is the public.

The ordinances of the two cities require the testing of all animals furnishing milk to be sold within their limits. By far the larger percentage of cows furnishing the local milk-supply, are within easy reach of the city and are brought within the inspection of the local veterinarian. After a herd has been inspected, and the diseased cows condemned and killed, it would certainly seem to be a business proposition for a dairyman to replenish his herd with tested cattle. In fact, many dairymen outside of the jurisdiction of the city health department, are voluntarily submitting their herds to the tuberculin-test, and buying nothing but inspected cows, purely as a business proposition to rid their farms of this bovine scourge.

With a little further enlightenment and the assistance of an awakening public sentiment, the dairyman himself can be depended upon to replenish his herd with inspected cattle. To show that many of them are doing this very thing I would call your attention to the Minneapolis Health Report for July, 1902, where the report of the local veterinarian shows 217 cattle tested for tuberculosis and none condemned, these herds having been previously purged of tuberculous cows. Again, the ordinances require the testing only of such cattle as are furnishing milk for sale, and the health departments would have no authority to test cows until their milk was placed on sale, or, at least, application made for the same. The state law also requires that cows tested and condemned must have been owned within the state for a period of one year, in order to secure reimbursement for the loss.

Why not take this matter at its source, and have the State Board require that all cows brought into the state shall previously have been tested. In other words, under the existing laws, we could put into effect the same regulations regarding the inspection of cows for breeding purposes or for dairy purposes, as exist at the present time between Canada and the United States.

I fervently believe in obtaining a clean milk, rather than the pasteurization of dirty milk. In June of this year the Minneapolis Health Department prepared a pamphlet giving some hints regarding the proper care of cows and milk, of which the following is a copy:

SOME HINTS REGARDING THE PROPER CARE OF COWS AND MILK IN ORDER TO INSURE CLEAN MILK

Milk is an exceedingly good culture medium for the growth of bacteria of all kinds, and modern studies show that the presence and numbers of bacteria form a good gauge of the general condition of the milk, and the care with which it has been handled. It has been found that with a clean can, clean cow and clean milker, the ordinary so-called "cow-odor" is not present in the milk. It is the desire of the Health Department not only to look after the percentage of butter-fat in milk and to the presence or absence of tuberculosis in the cows, but also to get as pure and clean a milk as is possible. The Health Department stands ready to issue special certificates to dairymen who are willing to follow their suggestions and to supply clean milk.

The subject can best be considered under the following heads:

1. Condition of barn.
2. Condition of cows.
3. The milkers.
4. Condition of utensils.
5. Process of cooling.
6. Transportation.
7. Condition of cans or bottles when returned from the city.

CONDITION OF BARN

Dirt and dust, usually so abundant in an average barn, readily get into the stream of milk or pail, and form a fruitful source of bacterial contamination. The common sources of dust are the hay-loft overhead, cobwebs on walls and ceiling, loose boards, dirty windows, floors of dirt, unclean manure gutters, excessive bedding, storage of grain or feed in the barn, the rations, such as piles of hay placed near the milking, and the storage of farm or other utensils in the barn, that soon become covered with dust. The barn should be frequently white-washed.

CONDITION OF COW

Much dirt that gets into milk comes directly from the cow. When the cow is being milked the udder is pulled down, which loosens dandruff, hair and dirt from all the adjacent parts. Particular sources of impurity that are apt to be overlooked in cleaning a cow are the folds between the udder and the flanks, and dirt on the tail. A cow should be groomed every day as you would groom a horse.

THE MILKER

A fruitful source of dirt is directly attributed to the milker. The dirt may come from the hair, hands, especially when chapped and scaly, finger nails, tobacco or clothing. It is better to have the milkers clean-shaven, and, when milking they should be clad in white duck or blue overalls and jumpers that are frequently washed. No one having consumption or any contagious disease should be permitted to milk the cows.

THE UTENSILS

These include pails, strainers, condition of creamery or dairy room, aerators, stationary vats, portable vats and bottles or cans. All utensils must be strictly clean, and, if possible, steamed or sterilized. In every utensil all seams must be well soldered to avoid hiding places for traces of dirt and coagulated milk. Cold or lukewarm water must first be used to avoid coagulation of particles of milk, then a cleansing with hot water, with soap or soda, and a final rinsing with hot water. After washing, cans or bottle should be turned bottom up on racks, and, if possible, steamed or sterilized. The simpler the pail the better. The plain open pail gives the best results. Metal strainers attached to pails are undesirable, owing to difficulty in keeping them clean. The best general strainers are absorbent cotton, cheesecloth, or Turkish towelling attached to the receiving cans by clothes pins. The milk should not be strained in the barn, but removed at once to the dairy, which should be detached from the barn.

PROCESS OF COOLING

The whole future condition of the milk depends a good deal upon its handling during the first forty-five minutes. The sooner it is brought to a temperature at or below 45 degrees F., at which point the growth of bacteria is greatly controlled, the better. The temperature of springs during the summer vary from 45 to 70 degrees F., with an average of about 55 degrees F. Hence this method of cooling is uncertain and defective, unless ice is added to the spring.

TRANSPORTATION

As soon as the milk is put into bottles or cans it must at once be surrounded by ice. Cans should be kept cold or iced until the milk is delivered. The wagon should be kept well cleaned.

CONDITION OF BOTTLES WHEN RETURNED

Bottle should be washed promptly and never used for any other purpose.

An elaborate and expensive plant is not necessary to put out a clean milk. What is needed is intelligent attention to detail. A small as well as a large producer can furnish clean milk. In general, it may be said that the following three heads include the essential conditions:

(1) Strict cleanliness, which includes the barns, yards, cows, milkers and all utensils. Bacteria which get into the milk by means of dirt are thus thoroughly excluded; (2) rapid and sufficient cooling of the milk (the few bacteria that do get in are thus prevented from growing); (3) thorough icing around the milk until it reaches the consumer. The production of toxins from the growth of bacteria is thus retarded.

P. M. Hall, M. D.,
Commissioner of Health.

In the body of that certificate the Health Department offers to issue special certificates to the dairymen who were willing to follow the suggestions offered in the circular. Up to the present time there has not been a single application for such a certificate. I believe in the effort to secure a certified milk, but hardly think the plan suggested would secure such. A certificate, to be of any value, should be issued by the same health board that inspects the cows and the milk. We will suppose, for instance, that a dairyman has complied with the first three requirements of the Minnesota State Board of Health, or in fact with all the requirements, thirteen in number, called for upon his certificate. If the city milk inspector, in his daily rounds, found this man's milk adulterated or below the legal standard and brought him into the municipal court and fined him, I would like to ask of what use or value his certificate from the Minnesota State Board of Health would be? As I said before the certificates should be issued by the board that inspects the cattle and the milk, and should only be issued after repeated inspections, and then only for a limited period of time.

Again, in closing, to recapitulate: In order to secure a certified milk, first, create a demand for such milk; second, let the certificates be issued only after repeated inspections and examinations of the milk; third, have the certificate issued by the city board of health, as they are the ones who inspect the cattle and the milk.

Dr. Lester W. Day: Dr. Day expressed his deep interest in the subject, and added that he had visited the Minneapolis milk companies' pasteurizing plant and thought they were taking a step in the right direction; but he criticised them for furnishing a milk containing only three and one-half per cent of butter-fat. The reply of the manager was that they could not afford to sell at the prevailing price a milk richer in fat. He said that if we could create a demand he would gladly furnish a milk containing four per cent of fat.

Dr. Day later moved that a committee of three be appointed by the president to act in conjunction with the State Board of Health in an effort to supply the demand for a "certified milk," and the motion carried.

The following committee has since been appointed: Dr. L. A. Nippert, chairman; Dr. L. W. Day and Dr. Thomas S. Roberts.

INTESTINAL OBSTRUCTION, WITH REPORT OF CASE*

By J. W. Andrews, M. D.

MANKATO, MINN.

Although very able papers have been read and exhaustively discussed in recent medical conventions, where many of those whom I now address were present, yet I offer no apology for presenting this subject to this society at this time, for as physicians and surgeons wo do not meet with any disease or ailment in which there is greater necessity for doing the right thing at the right time, than in intestinal obstruction.

It is probable that the Greeks and the Romans recognized and operated for intestinal obstruction, though ancient literature is somewhat vague on this point. We read, however, from a credible source that Praxagoras operated for intestinal obstruction by making an abdominal incision, then incising the gut and allowing the feces and gas to escape. He then sewed up the gut, and closed the abdomen. We are not told whether this relieved the obstruction, or whether or not the patient lived.

It is not my intention to write an elaborate paper on this subject, and I shall purposely omit much that would be of interest, but I desire to avoid prolixity. Then, again, the value of a paper in a medical society does not lie as much in what the writer says as in the discussion that follows. As this is the season of the year when we are most likely to have cases of intussusception, most of my remarks will apply to this form of obstruction.

We read much in the books about intestinal obstruction from foreign bodies, but as a matter of fact this rarely occurs. A gall-stone, an enterolith, or impacted feces may, but rarely do, cause obstruction. I have practiced medicine for a quarter of a century, and have had a fairly large and varied practice; and yet I have never seen intestinal obstruction from any of these causes, except once, and that was in a dog. Without doubt the most frequent cause of obstruction in the young is intussusception, and this is nearly always acute. How important it is that the physician make an early and correct diagnosis in these cases. Two symptoms are invariably present, namely, persistent vomiting and obstinate constipation. But these are not, *per se*, pathognomonic or, indeed, very diagnostic. Let me warn you, gentlemen, not to attach too much importance to these symptoms; they become important only when associated with others. Twice I have been called to operate for intussusception with the following symptoms: 1, pain in the bowels; 2, unrelieved and seemingly unrelievable constipation; 3, vomiting; 4, distension and tympany. In each case cathartics and purgatives had been administered almost without number and limit. Enemata had been given, both high and low, and had the effect of bringing away only small quantities of hardened feces. Diagnosis: intestinal obstruction. Remedy: operation; because of age of patient, the operation being recommended as a last resort.

Now, let us analyze these symptoms a little. First, pain; so far correct. Pain is one of the first symptoms, if not the first, of intussusception. 2d, constipation; this is also a symptom. 3d, vomiting; this is likewise true. 4th, distension and tympany, also a symptom; then, *a priori*, intussusception. There is nothing wrong with the premises and the conclusion, except that they stop short of vital facts. It will be observed that a sign which, when taken together with the symptoms just enumerated, is almost pathognomonic, namely, slight hemorrhage from the bowel, was absent in both of these cases; and another which I regard as very diagnostic was absent, namely, borborygmus accompanied with peristalsis visible upon the abdominal wall. The first of these is manifest only in intussusception, the latter in all forms of intestinal obstruction. The first symptom, pain, had been met with large doses of opiates, and upon any reappearance of the pain the opiates were again administered. Opium was the cause of the obstruction; and produced constipation, distention, and tympany. In both of these cases the withdrawal of the opium, and the administration of large doses of calomel removed the obstruction, and cured the patients.

Should opiates ever be given in intestinal obstruction? Yes, with great propriety after the diagnosis is fully made and before an operation is performed. Since an operation should be performed as soon after a definite diagnosis is made as the patient can be gotten ready, there will not be much need for the administration of opiates, and even at this time they should be given as little as possible; for, after the operation, we do not want our patient to be in any degree under the influence of an opiate.

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*Read before the Southern Minnesota Medical Association, Owatonna, Minn., August 7, 1902.

In operating for obstruction, of whatever kind, we are nearly always met with two alternatives: The first is an enterostomy, thus establishing an artificial anus; the second is a complete operation, possibly excising a portion of the bowel or something less formidable. I am sure I have lost, in my earlier practice, a few cases of appendicitis through my anxiety to make an operation as nearly surgically complete as I could. I have broken up adhesions, tried to find the appendix, carefully mopped out the inflamed and suppurative region with sponge-cloths wet in a warm normal saline solution, and finally committed the additional and probably fatal blunder of irrigating the abdominal cavity with a nice warm normal salt solution. As I look back upon these cases I feel that I really made pretty fine operations,—operations that would have looked perfect to a class of students; but my patients died. Now, if I must operate upon a case of this kind, I simply make a good, free opening with the greatest care; mop out what I conveniently can; put in good drainage for the subsequent twenty-four hours, at least; keep my patient a little inclined to the right side; and, if necessary, do my nice operation at some future period. Since I have adopted this plan I do not sign so many death certificates. So it is with intestinal obstruction when we must operate; we are sometimes over-anxious to make a surgically complete operation, and we do so, and a funeral is the result.

It is not pleasant to subject a patient to an operation, and have to leave him with an artificial anus, and then say to him and his friends that this is only a temporary operation; and that the patient will have to submit to a more formidable one later. But it is less pleasant to have a funeral.

We will assume that a patient has been suffering with intestinal obstruction for two or three days; that both stomach and intestines are filled with liquid and gaseous contents; that there have been frequent attacks of vomiting. The patient is weak; pulse 120 or more, and rather thready. To begin with we have a patient who will not bear an anesthetic well. If we anesthetize this patient, whom I have assumed we are called to treat, and make a complete operation—that is, search for and find the seat of obstruction, and very possibly make an anastomosis and exsection—we shall lose our patient. If under an anesthesia of short duration, or possibly a cocaine anesthesia, we make a small abdominal incision,—an enterostomy and artificial anus,—and leave the radical operation until a subsequent period, our patient will probably get well.

The prime object of a surgical operation is not to make a scientific and technically complete one, but to save the life of the patient.

The treatment after operation for intestinal obstruction is about the same, no matter what the form of obstruction. Under no circumstances should opiates be given. I desire to be emphatic on this point. Opium paralyzes the bowels, the very thing we wish to avoid; it decreases the secretions, which we wish to increase; it constipates the bowels, the very thing we do not want; it causes the retention of gases, the one thing we are most anxious to get rid of; and, finally, it masks the real condition of the patient so that we are less able to interpret the symptoms.

There are a few points which I desire to emphasize, and I shall do so in the way of recapitulation.

1st. In diagnosing intestinal obstruction, consider well the associated symptoms, and do not place too much reliance upon any one or two symptoms.

2d. Operate as soon as the diagnosis is made; do not try medicines for a few days and then operate, for this would be a fatal compromise.

3d. If necessary to relieve pain and husband the strength of the patient, opiates may be given after the diagnosis is made and before the operation.

4th. Never give opiates after the operation.

5th. Perhaps of most importance, if obstruction has existed for two or three days, the abdomen is distended and tympanitic, the pulse rather rapid and wiry, do not try to make a technically complete operation, but rather perform an enterostomy, and be content with an artificial anus.

Although a large part of my remarks refer to intussusception, the case I here report is one of obstruction from another cause.

The following is the history:

Mrs X——, aged 35 years, married, mother of three children. On July 29, 1899, I removed from the patient by abdominal hysterectomy a fibroid uterus about the size of a child's head. The patient suffered no shock after the operation, and her convalescence was most beautiful and satisfactory. After the third week she returned home, where she recovered rapidly from the effects of loss of blood and other symptoms consequent upon her fibroid uterus. She remained in good health until the night of June 6, 1902, when she was taken violently ill with severe pain in the appendiceal region, vomiting, and other svmptoms simulating appendicitis. The patient was brought to the hospital on the stretcher June 7. Her attending physician sent her to the hospital for immediate operation, but the physician whom she wanted to operate was absent, and remained absent for about two weeks. As her symptoms were at this time in no way alarming she was permitted to wait his return, and under medicinal treatment with rectal alimentation, there was, in general, marked improvement in her condition; the pain subsided, temperature dropped to 99 degrees and 100 degrees, and the pulse was about normal. So good had her condition become that the physician who was attending her thought it safe to give her nourishment by the stomach.

About the 14th or 15th of June she again grew somewhat worse. Two symptoms began to appear at this time which were ominous: the bowels did not move as much as it was felt they ought to, and the abdomen was considerably distended and tympanic. The distention was not very great, yet it existed and was persistent. The patient began again to have pain in the appendiceal region and vomiting. The stomach itself was bloated, and about the 17th of June the patient vomited a large quantity of fecal matter. About this time I saw her for the first time since she had been taken sick, and I agreed with Dr. Lida Osborn, who was attending her, that there was undoubtedly partial obstruction. That the obstruction was not complete was evident from the fact that the patient was having some movement of, and passing flatus from, the bowels every day. That she had obstruction, however, was evident from the fact that she had bloating, tympany, borborygmus, and painful peristalsis. After vomiting the fecal matter, as above mentioned, she had a pretty good movement of the bowels, and bloating became less, the pain less, and the patient for a few days did real well again, but some abdominal distention, tympany, and some borborygmus were still present.

June 21st. In addition to the above symptoms all fecal matter had ceased to pass through the bowels, and for this reason no food was given by the stomach, but patient was nourished per rectum.

June 22d. All of the above symptoms were rather worse, with, however, the pulse ranging from 90° to 100°, temperature about 100°.

June 23d. Condition of patient unchanged, and she consented to submit to an operation. The patient was prepared in the usual way for an abdominal operation. Having been anesthetized, an incision was made in the median line below the umbilicus. The omentum was found to be adherent to the old abdominal scar. So great was the distention at this time that as soon as the abdominal incision was completed, the intestines, now distended with flatus and liquid, pushed themselves out, and it was difficult to keep them out of the way while an exploration was being made for the seat of obstruction. The intestines were somewhat bound by adhesions one to the other in the appendiceal region. After separating these the obstruction was found in the ileum, just above the ileocecal valve. Two constricted cicatricial fibrous rings, about a finger's breadth, were found in the ileum. These were from three to three and one-half inches apart. The upper one is fully shown in the specimen which I now present to you. The lower one is partially shown in one end of this specimen, but in excising the section of the intestine the lower incision was made through the cicatricial ring. A strong fibrous band extended from the upper cicatricial ring upward and outward to the abdominal wall. At the one end it was attached to the mesentery where it joins the intestine; at the other end it was attached to the parietal peritoneum. This band was nearly the size of an ordinary lead-pencil, and drew the intestine upward and outward. I released the intestine by cutting the band a short distance from the mesentery. The section of intestine which you now see was excised, and the open ends of the intestine closed in the usual way, and a side to side anastomosis was made with a Murphy button..

During the operation the intestines were allowed to protrude, but were kept well covered and enveloped with warm sponge-cloths rung out of a normal saline solution. During the operation the patient was given a quart of normal saline in the breasts, and a total of a fifteenth of a grain of strychnia. Notwithstanding this the patient suffered considerable shock, and was nearly pulseless when she left the table.

June 24th, 8 p. m. Patient has survived the shock nicely, and rested well during the afternoon.

June 25th, 8 a. m. Pulse 104, temperature 100°, patient passed large amount of flatus during the night, and the bloating was considerably less.

June 26th. Patient has done very well since recovery from shock. To-day her temperature is normal; pulse 96 and strong; the distention has nearly all disappeared.

June 27th, 8 a. m. Patient not quite so well; abdomen is again considerably distended. 1 p. m. Patient growing worse, pulse 115, temperature 101°. She complains of a great deal of pain, generally radiating over the abdomen. She has an anxious, distressed appearance, and is somewhat delirious. During the afternoon the patient grew rapidly worse, and died at 7:30 p. m.

AFTER-TREATMENT

The after-treatment consisted in an enema composed of a drachm of sulphate of magnesia to one pint of water repeated every four hours, and the patient was nourished entirely by rectal alimentation. Strychnia, gr. 1-60, and digitalin, gr. 1-100, were given every three hours as long as the patient's condition seemed to indicate it.

POST MORTEM

The post mortem, made soon after death, showed inflammatory exudate generally over the bowels; and the intestines were everywhere adherent. These adhesions were easily broken up, yet it would have taken pretty strong peristalsis to have accomplished this; and therefore we really had a secondary obstruction, because of the distended adherent intestines. The Murphy button was in good position and no leakage around it; the sutured bowel was in good condition and well united.

THOUGHTS AND AFTERMATH

1. There were three or four very competent physicians who saw and examined this patient in the early part of her sickness. All diagnosed the case appendicitis, and who would not, with severe pain and tenderness in McBurney's region, accompanied with vomiting and fever, and no symptoms pointing to anything else?

2. I believe if I had made an artificial anus under local cocain anesthesia, and allowed the bowels to thoroughly empty themselves of gas and feces, and the condition of the patient otherwise to improve before making the radical operation, I might have saved the patient's life.

3. While I have always made intestinal anastomoses with a Murphy button, and do not know that I ever had reason to regret it, yet after mature reflection, and from the counsel of one more able than myself, I think anastomosis without the Murphy button, but with the recognized intestinal suturing, is much better, because the opening through the Murphy button is small and inelastic, and there is danger of the accumulated feces moving downward and clogging the button, and, by peristaltic pressure from above, dislodging it too soon. Anastomosis without the button will leave a good, large, patulous opening.

4. The intestines will not bear much handling, and the sooner a surgeon learns this, the sooner will his success improve in all abdominal surgery. Someone has beautifully said in reference to intestinal surgery: "Elsewhere nature seems to kindly cover up our faults; here she seems to cruelly find out and expose them."

THE PREVENTION OF NAUSEA AND VOMITING AFTER ETHER ANESTHESIA

Dr. Ralph J. Hess states that nausea and vomiting after ether are due to absorbed ether being excreted by the glands and mucous membrane of the stomach producing an acute gastritis. He thinks that the use of nitrous oxide gas preceding the administration of ether will greatly reduce the amount of ether used. In order to dilute the excreted ether it is desirable to have the stomach partly filled with water. A drink of water is given before the anesthetic is administered, therefore, and another as soon as consciousness is regained. Drugs avail nothing in prevention or treatment. The amount of ether should be as small as possible, and it should be administered in such a way as not to cause bronchial irritation with excessive mucus.—Med. Rec.

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MILK-SUPPLY OF LARGE CITIES.

Every large city must sometime confront the problem of a safe milk-supply, in order that many of the communicable diseases may be prevented, and stamped out of a community. The paper on this subject, published in this issue of the Lancet, by Dr. H. M. Bracken, secretary and executive officer of the Minnesota State Board of Health, is one that should appeal strongly to every physician and sanitarian. Dr. Bracken is conservative in his statements, and he suggests plans, which, if carried out as far as practicable, will do much to restore confidence in milk and dairymen.

The difficulties of sufficient and frequent inspection are almost unsurmountable unless the physicians of the state are in sympathy with the movement, and uphold and support Dr. Bracken in his efforts to secure a safe milk-supply. The use of tuberculin is now recognized as a scientific and reliable means of weeding out tuberculous cows, and if used by the local health boards every time a herd is increased by new stock, one great source of tuberculosis will disappear.

Cleanliness, rigidly enforced, will do away with the flimsy efforts at pasteurization, which is so much advertised, yet is so filthily performed. If pasteurization is carried out with the proper sterilizing apparatus, under skilled workmen, much good will be done. If all of the methods for the care and purifying of milk were practicable, there would be no field for argument; but if only one or two measures are available, let them be done as thoroughly as possible.

The Hennepin County Medical Society, through its president, has appointed a committee to investigate the subject and report later. This committee is to investigate the subject impartially, not in behalf of the local or state boards of health, but independently, yet in the capacity of advisors. This committee is made up as follows: Dr. L. A. Nippert, chairman; Dr. L. W. Day and Dr. Thomas S. Roberts.

THE DOCTOR IN POLITICS AGAIN

When Governor Gage, of California, denied the existence of plague in San Francisco, and suppressed the facts regarding its progress, he showed a weakness, or bad judgment, that stamped him an unsafe man for his position. He failed to receive a renomination by his party, and, as a rebuke to him or as a mark of confidence or respect to the medical profession, Dr. George C. Pardee was chosen as the nominee for the high office. Dr. Pardee is a graduate of University of Leipsic, Germany.

Throughout the state of Minnesota there are many medical men who are before the people for nomination for offices that are municipal rather than medical. In our own city, the passing of Dr. Ames is an illustration of what depths a medical politician may sink to. But the less said of this case, the better.

On the primary election ticket in Minneapolis the names of two doctors will be placed before the people for mayor,—Dr. Henry Nelson, the present city physician, and Dr. Hugh Nelson, an advertising quack, who takes advantage of the similarity of names and the opportunity to do a little quack advertising on the side. Dr. Williams and Dr. Golden are striving to be coronor. Dr. Quinby is now on the school board, and Dr. J. F. Force, a retired physician, is a candidate for membership on the same board. Dr. W. F. Nye expects to be an alderman.

When medical men have the time to spare to public duties, they have opportunity to honor the profession and serve the public, for in few offices can their special training and knowledge fail to be of special value.

PROFESSIONAL HARMONY

In many of the small towns, as well as in the large cities, throughout this and other states, there is a strange lack of good fellowship and harmony among medical men.

A young man, perhaps a recent hospital graduate, well equipped and with a pleasing manner and an air of confidence in his own ability, acquired by contact and experience, settles in a community where one or two men have practiced medicine for years. In some places he is welcomed by his confreres, and admitted into their confidence after an interview or ripened acquaintance. Harmony is at once established, and the nucleus of a medical society is formed or a lifelong friendship established. The people recognize the new blood of enthusiasm that permeates the new-comer and stimulates the older practitioner. A hospital is suggested, instituted, and supported; and the doctor becomes a greater power, his influence broadens, and matters medical are better understood and appreciated. In an adjoining town the new-comer is received coldly, treated discourteously, and his progress hampered. If he is a capable man, attends strictly to his own affairs, and waits for business in an ethical way, keeping out of factional fights, he may win his way into good business. If he is resentful, spiteful, and given to criticism of his untried brethren, discord prevails, and the community is the sufferer. Each physician is soon at sword's point with his fellow, refuses to consult with or assist him, and each tries to outdo the other in vindictiveness and abuse. The result is more suffering of the people, dissatisfaction and distrust, and in the end neglect and decline in sanitary progress in the community.

The harmony or discord, which is so frequent in small towns, is enacted with greater force in the larger cities, and the result is the formation of cliques or factions, which are constantly at war with each other, bending every effort to embarrass new departures, and opposing professional advancement or plans for the good of the people. If a man occupies a state or city appointment, he must fight his way through opposition of men who should support his endeavors. He must be successful in many battles before he is recognized as earnest and honest in his intentions, and when he at last becomes useful to the public and has the support of his colleagues, he is dropped to make way for a new and untried appointee. When a medical man in good standing occupies an important post he should be supported by all right-minded medical men, even if he is not perfect, or does not always agree with everyone else, or is man enough to have ideas of his own and the force and energy to attempt to carry them out. Because of his earnestness, vigor, and push, and the publicity he acquires, he should not be called a politician; rather should he be supported loyally by his associates who, by sinking their individual likes or dislikes, create a feeling of confidence and trust about him for the good of the people.

The large medical societies of large cities are doing much to promote harmony in the medical profession. Harmony among men promotes and makes organization of the profession efficient, powerful, and useful. If the carping critics, fault-finding and jealous, would spend the same amount of time in the study of clinical medicine that they devote to slandering their fellow-workmen the medical profession would soon be so harmonious that it would but ask to cheerfully receive from the public all it is entitled to.

All this is solely to promote a better feeling in the profession, and is not written in the spirit of pique, but rather as a hope of smoothing over what may be an imaginary break in the line of harmony. Let us look on the better side of things, get closer together, cultivate one another, and then stick together in one large mass, and work for the good of all.

SOCIETY MEETINGS

The season of the year is at hand when medical societies must begin their regular monthly meetings. The rest and freedom from such work for four months should arouse the physician to attend the meetings regularly, contribute papers or clinical reports, do his share of the work of the committees, and, in every way, assist in upholding and upbuilding an organization that will be instructive, entertaining, and interesting to himself and others, and one that may form a conspicuous pillar in the State and American Medical Associations.

The Lancet is ready, willing and anxious, to aid in every way by publishing the announcements of meetings and reports of their proceedings; and it asks for it share of the papers for publication, promising that the work will be well done, and with the least possible inconvenience to the writer.

BOOK NOTICES

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Sciences. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M. D., New York City. Volume IV. Illustrated by Chromolithographs and Eight Hundred and Fifty-nine Half-Tone and Wood Engravings. New York: William Wood & Co., 1902.

The fourth volume of this work lies on our table. We have previously expressed an enthusiastic opinion on the preceding volumes, and we see no reason to alter our dictum. While, as a rule, we are not specially favorable to "reference" works, we must except this one, for it is as full of valuable knowledge as an "egg is full of meat."

To individualize on any of its contents were invidious, as all the subjects broached are treated in an admirable manner. To the student it is invaluable; to the general practitioner it is almost a *sine qua non.*

When the work is completed it will be a small library in itself. We cannot too highly recommend it to the busy medical man of all classes.

Howard Lankester.

Woolsey's Surgical Anatomy. Applied Surgical Anatomy Regionally Presented, for the use of students and practitioners of medicine. By Geo. Woolsey, A. B., M. D., Professor of Anatomy and Clinical Surgery in the Cornell University Medical College; Surgeon to Bellevue Hospital; Etc. Octavo, 511 pages, with 125 illustrations, including 59 full-page inset plates in black and colors. Cloth, $5.00 net; leather, $6.00 net. Philadelphia and New York: Lea Brothers & Co.

Although little can be advanced as original on the subject of anatomy, there is in this work marked originality on the part of the author in presenting surgical anatomy in so attractive a form. He has gathered from sources unavailable to the ordinary practitioner the most valuable aids to study. The admirable plates from Lestut, Lillaux and others, together with his own, embellish and elucidate the work, which presents what is most desirable to know and the most useful in application.

We know of no work that would better repay a glance immediately before commencing a grave operation; for the operator may feel assured that in this book he will be furnished, in a few words, and in a short time, what will refresh his memory, and give him the most salient points deserving of his notice, as well as the latest acquirements of surgical science.

Of peculiar excellence is Chap. IV, describing the abdomen and its contents, and treating of them in their surgical aspect. There are few so learned in this department of surgery but would add a valuable accretion to knowledge already attained should they carefully peruse this chapter. The student who masters his subjects as here portrayed could meet without fear the most rigid examination.

It is not alone in the field of surgery that the usefulness of this work is apparent. To the physician it will prove of inestimable value as an aid to diagnosis and as a guide to the intelligent treatment of almost every variety of disease.

E. S. Frost.

CORRESPONDENCE

MEETING OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION

Catskill Mountains, N. Y., Sept. 3, 1902.

Editor Northwestern Lancet:

The Society after a delightful ride up the Hudson by special boat, is located at this place, where one does not need a static machine to develope ozone.

So far the *x*-ray has been the only subject for discussion, and I presume your readers will be most interested in that. Every one is certain that lupus and superficial malignant growths can be cured with absolute certainty by the *x*-ray. In the matter of internal growths there is more uncertainty and more difference in the experience of various members. A great deal, of course, depends upon the amount of glandular involvement and metastasis. All agree that even in cases that will prove fatal the *x*-ray gives relief from pain, diminution of discharge, removal of odor, and often quite a retarding effect on the growth. Cases of cancer of the breast, the uterus, the rectum, and the larynx have been reported cured.

In regard to apparatus the static machine seems to be the favorite, although some have also the coil in the office, and use either as it happens. The general feeling, however, is that the coil is more liable to ruin tubes and burn the patients.

For superficial growths the tendency is to use tubes of low-vacuum, backing up not more than a two-inch spark gap, although even here some prefer the high-vacuum tubes and shorter exposure. In internal growths there is no difference of opinion. The high-vacuum tube, backing up a spark gap of not less than four inches, is always used. Here penetration is wanted, and as little effect on the skin as possible. One expects to get tanning of the skin, however.

The use of protective shields is being done away with to quite an extent, except for protection of the hair and eyes, and there is a desire to radiate a much larger surface than formerly, and thus reach all proliferations of cancer growths.

In internal cases and also large superficial growths, one must expect a decided auto-intoxication manifested variously by fever, diarrhea, and general symptoms of sepsis. The majority of internal cases take much longer time for cure than has been talked in the past.

There is quite a strong feeling that in suitable cases for operation it is well to use the *x*-ray for a period, and then the knife to remove what there is left of the growth,—and thus lessen the amount of sepsis,—and then follow with more radiance. Most cases are treated every other day; some twice a week; and some three times.

The brush discharge with wooden electrode, is a valuable adjunct to the *x*-ray.

Remarkable results were reported in cases of *x*-ray treatments of tubercular glands of the neck, fibroids, in checking bleeding, and in reducing the size of the tumor, pustular acne, chronic inflammatory processes, even with some pus formation, carbuncles, antrum disease, nevi (vascular and pigmentary forms), several sarcomas, and one very bad case of melano-sarcoma of the face.

The amount of work that has been done by the members of the Society in the last year, and the wide field that seems to be opening up for the therapeutic use of the *x*-ray in treatment, make one hope that we have found a very valuable addition to our armamentarium which still needs much careful use and experiment before it will be certain just how fully it will satisfy our expectations.

Very truly,

W. P. Spring,

Fellow American Electro-Therapeutic Association.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. J. C. Fjelstad has located in Yankton, S. D.

Dr. H. J. Morrill, a recent Chicago graduate, has located at Wahpeton, N. D.

Luther Hospital of St. Paul has received a gift of improved property valued at $40,000.

Dr. J. J. McKinnon, mayor of Wadena, Minn., who has been dangerously ill, is much improved.

Dr. Syver Vinje, a recent graduate of the State University, is practicing at Henning, Minn.

Dr. Willis W. Creswell, who graduated from Hamline in '97, is now located at Belview, Minn.

Dr. J. M. Allen, of White Rock, S. D., recently made a trip to Wisconsin and returned with a bride.

Dr. Fred U. Davis, a graduate of the State University, class of 1902, has located at St. Clair, Minn.

Dr. C. W. Watson, of Boyd, Minn., is at home after an absence of two months in special study in New York.

Dr. A. L. Marks, of Moorhead, Minn., has gone abroad for a year's special study in the German universities.

Dr. C. M. Gould, of West Superior, Wis., expects to go to Tucson, Arizona, where he will build a large sanitarium.

The Clover Leaf Mining Co., of Doubaix, S. D., is erecting a hospital building to be used for the company's employes.

Dr. Albert Charpentier, of Belgrade, Minn., has returned from the East, where he has been doing post-graduate work.

Dr. Enoch Hougseth, a late graduate of the State University, is house physician at the State Reformatory, at St. Cloud, Minn.

Dr. M. S. Hirschfield, who has been practicing but a short time at Akeley, Minn., has been induced to locate at Deer Creek, Minn.

Dr. S. D. Sour, formerly of St. Clair, Minn., has located in Worthington, Minn. Dr. Sour is a graduate of Hamline, class of '96.

Dr. E. O. Miller, of Aberdeen, S. D., is at home after an absence of two months in Philadelphia, where he went for special study.

A location has been secured in Fergus Falls, Minn., for the hospital to be erected under the auspices of the United Lutheran church.

Dr. W. T. Bailey, Jr., a recent graduate of a Philadelphia medical college, has become an assistant of Dr. A. W. Shaw, of Buhl, Minn.

Dr. Daniel Tufte, of Pelican Rapids, Minn., has been obliged to close his hospital, temporarily, because competent help cannot be obtained.

Dr. Charles Lester, who was formerly a resident of St. Paul, but who has been practicing in Kentucky, has decided to locate at Zumbrota, Minn.

Dr. Oscar H. Woolner, a graduate of the University of Minnesota, class of 1902, has entered into partnership with Dr. Cole,of Fergus Falls, Minn.

Dr. Cajyrellen, of the Hastings (Minn.) Surgical and Medical Institute, has gone to Johns Hopkins to take a special course under Dr. Kelly.

Dr. Vecolay Schjelderup, of Granite Falls, Minn., has sold his private hospital to a nurse, who will hereafter receive patients from any physician.

Dr. H. E. Houston, a graduate of Hamline, and now practicing in Kalispell, Montana, was married last month to Miss Julia Poe, of Wood Lake, Minn.

Dr. Archibald MacLaren, of St. Paul, has been appointed a member of the executive committee of the State Medical Society in place of Dr. John Rogers, who was unable to serve.

Dr. Axel O. Brustad, who recently began practice at Lake Park, Minn., died of heart disease last month. Dr. Brustad was graduated from the State University with the class of 1902.

At the bimonthly meeting of the Eastern Dakota Medical Society, held at Brookings, S. D., Sept. 4, papers were read by Dr. J. E. Coulter, of De Smet; Dr. E. Klaveness, of Brookings, and Dr. R. W. Tennant, of Brookings.

Dr. Paul H. Burton, of Stillwater, has located in Hallock, Minn., and formed a partnership with Dr. M. M. Lockwood. Dr. Burton is a graduate of the State University, and has been assistant physician at the state penitentiary.

Dr. Frederick A. Kiehle, who graduated from the State University, class of 1900, has removed from Salt Lake City to West Jordan, Utah, ten miles south of the former city. He is physician and surgeon for two large smelting companies.

Dr. G. R. Pease, of Redwood Falls, Minn., has been obliged to give up practice on account of poor health. He will go to a milder climate. His practice will be taken by Dr. Wallace E. Belt, of Viroqua, Minn., who formerly lived in Redwood Falls.

At the next monthly meeting of the Hennepin County Medical Society, Dr. O. S. Chapman will read a paper on "The Importance of the General Practitioner," and Dr. H. B. Sweetser will speak on tetanus, giving a report of a recent case successfully treated by him.

On the evening of Oct. 4, Dr. William Osler, of Johns Hopkins, will deliver a memorial address on "William Beaumont, the First and Greatest American Physiologist," in St. Louis, under the auspices of the St. Louis Medical Society. A general invitation to be present is extended to the medical profession of the Northwest.

Dr. M. Russell Wilcox has returned from a sojourn of several months in Europe, and is at home in his offices in the Pillsbury building. He will devote himself hereafter, in addition to his University duties, to practice exclusively in diseases of the eye, ear and accessory sinuses. He has spent the two summers past in the clinics of Fuchs, Politzer, Morton, Fisher, and Lambert Lack.

The physicians of Stearns and adjoining counties propose to organize an inter-county association. The invitation to the meeting for organization is signed by Dr. W. L. Beebe, of St. Cloud, and reads as follows: Every physician residing and legally practicing in Stearns, Benton, Mille Lacs or Sherburne counties, who is in good professional standing and who is practicing nonsectarian medicine, is respectfully requested to meet with the local profession at Dr. Beebe's office in St. Cloud, September 18, at 8 p. m.

WANTED

A Scandinavian physician is wanted in a small town in North Dakota. The surrounding country is in a prosperous condition and will give a physician a good practice. Address H., care of N. W. Lancet, Minneapolis.

THE ETHICS OF CONSULTATIONS

The utility of consultations has often been questioned on the score that they mean little or nothing for the patient. The practitioner in a difficult case is supposed to need endorsement for his course, and he is said to obtain it in the unqualifiedly approving verdict of his counsellor. It is further claimed that the true ethics of the profession admit of no other alternative.

From the patient's standpoint this is true enough, and is as it should be in view of the necessity of preserving confidence in the medical attendant. The consultants have, on the other hand, every opportunity to differ in their private conference, but it is obviously unnecessary to do so in the presence of the family. Any disagreement that may exist as to diagnosis and treatment should be suitably adjusted before a conjoint verdict is rendered. If this course is impossible each one concerned should give a separate opinion and allow the patient or his friends either to choose what suits them best or seek other advice. Under no circumstances should such different views be offered until after the freest possible interchange of views in the secrecy of the consulting room.—Medical Record.

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THE PROSTATE FROM THE GENERAL PRACTITIONER'S STANDPOINT*

By John B. Murphy, A. M., M. D.

CHICAGO

Mr. Chairman and Members of the Association:

Instead of reading a paper, I will take up the consideration of the prostate from the general practitioner's standpoint, rather than from the surgical standpoint.

ANATOMY

The prostate is a glandular and a muscular body situated in front of the bladder, entirely behind the triangular ligament of deep perineal fascia, immediately anterior to and in close contact with the rectum, completely surrounding the prostatic urethra, being tunneled by the prostatic urethra, the urethra occupying the second anterior fifth of the space,—from before backward.

We have become so familiar with looking at the prostate from a surgical standpoint that it is a hard matter to view it from a general practitioner's standpoint, but this should not be so. We should become thoroughly familiar with it from the proper standpoint, relating to the general practitioner's view.

Situated in the front of the bladder as it is, we naturally believe that it is out of reach of surgical interference and a long distance away, but, fortunately for the surgeon, this is not true.

Four-fifths of the bulk of the normal prostate is behind the posterior level of the urethra. Its greatest fixation is by its attachment to the posterior layer of the triangular ligament. When the ligament is divided, therefore, and the prostate freed from it, considerable latitude of motion is permitted. On the anterior surface it is rather loosely attached to the urethra; on the posterior surface it is firmly fixed to the urethra; the mucous lining of its glands and of the ejaculatory ducts and prostatic sinuses are continuations of the mucosa of the urethra, so that it is not possible to remove the entire prostate without removing the prostatic portion of the verumontanum; however, it is possible to remove the lateral and posterior lobes of a hypertrophied prostate, allowing its isthmus to remain, and retain its anterior portion of the urethra and three-fourths of its circumference. The anterior urethra is crescent-shaped, its convexity forward; the posterior surface of the urethra vaults forward into this crescent, the elevation being made up of the caput gallinaginis, utriculus, ductus ejaculatorii, and the connective-tissue surrounding them,—the middle lobe being behind.

The middle lobe, in the normal anatomical condition, is a small, bullet-shaped, tongue-like projection from the base of the prostate, posterior to the urethra. It is not a lobe, when compared with the lateral lobe. It is merely a projection in the direction of the bladder from the posterior commissure, between the lateral lobes; and when the lateral lobes and the posterior commissure are removed, it is practically detached except from the mucosa.

The gland is surrounded by a distinct capsule, which is smooth over the lateral lobes, but is depressed into the gland and divided into layers around the vessels in the median line. This vascular area runs parallel with the urethra, and directly into the centre line. Capsular divisions, therefore, in the removal of the gland should be made over the lateral lobes and parallel with the line with the urethra, that this vascular area may not be invaded until the lateral lobes are decapsulated and prepared for extirpation, and the hemorrhage thus avoided. The seminal vesicles recede from the prostate along the posterior wall of the bladder and are closely attached to it.

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*Read before the Minnesota Valley Medical Society, May 6, 1902.

The vesicorectal peritoneum is a long-distance from the base of the prostate, and in subcapsular enucleation its integrity is not in danger of being disturbed.

The arterial supply of the prostate is from the inferior vesical and the middle hemorrhoidal arteries. These are subdivided at the inner margin of the capsule into small arterioles, and when the true capsule is peeled off they give rise to little hemorrhage. The veins, which form a plexus in the capsule, empty into the vesicoprostatic plexus.

The lymphatic supply is meagre; the vessels accompany the venous plexus, and finally end in the internal iliac nodes. The nerves of the prostate are branches of the hypogastric plexus.

In its minute structure the organ is made up of a stroma of connective-tissue, smooth muscular fibres and glandular tissue. The muscle fibres constitute about one-half of the entire mass of the gland, and are continuous with the muscle fibres of the bladder-wall above; below they are mingled with a small amount of voluntary muscular tissue derived from a transverse perineal muscle.

The gland is of the branch or tubular variety. It secrets a milky fluid, which at the moment of ejaculation is added to the seminal fluid, and appears to play an important role in the mortality of the spermatozoa, as without the addition of this fluid, in some of the lower animals, fecundity cannot take place.

While in its normal anatomical position the prostate stands in front of the bladder and surrounds the urethra, in its hypertrophied condition it has an entirely different relation to the bladder. It normally extends backward into the bladder only to the sphincter vesicæ internus, which shows bladder-wall with prostate removed. In its pathologic or hypertrophied condition it incapsulates the neck of the bladder in a cuff-like manner, extending many inches upward on its walls and often protrudes into the vesical cavity, carrying on its surface the muscularis and mucosa vesicæ; occasionally a pedunculated lobe may be extended through the muscularis and only retain the mucous covering; this, however, rarely occurs except from the posterior lobe. In the normal anatomical condition, the muscular fibres of the prostate are continuous with the muscular fibres of the apex of the bladder-wall, but as the prostate enlarges it extends cone-shaped and upward on and around the neck of the bladder, and its muscle-fibres in the upper part appear to be distinctly separated, or at least easily separated from the muscle-fibres of the bladder. This anatomical relation gives distinct assistance and guidance as to the separation and removal of the prostate from the bladder-wall, i. e., at the extreme apex of the bladder it would be difficult to distinguish between the prostatic and bladder muscular fibres, while, if the base of the prostate be exposed, the prostate can be shelled from the bladder-wall, from above downward, with ease and with comparative safety to the integrity of the bladder-wall, i. e., if we look upon the prostate as a cuff, closely attached at its apex to the bladder-wall and loosely attached at its base, we can see how its lateral lobes can be scrolled or rolled forward with ease, with the assistance of hook-retractors, until it reaches the apex attachments.

PHYSIOLOGY

At the cervix of the bladder the circular layer of the muscular fibres is strengthened, and has been supposed to act as a sphincter, with regard to the urethral orifice: it is called sphincter vesicæ internus. Around the urethra just outside the bladder is a circular layer of striated muscle, which is frequently designated as the external sphincter, or sphincter urethræ.

When the urine accumulates in the bladder, to prevent its escape the elasticity of the parts, aided by the tonic contraction of the internal sphincter, suffices. This function of the circular layers of the fibres, which compose the internal sphincter, is disputed by some observers. That this sphincter controls, absolutely, the flow of the urine, I have demonstrated conclusively on three of my cases after the prostate was removed, and the posterior prostatic urethra entirely removed with it. It was necessary in these cases to introduce a forceps or a catheter to allow the urine to escape from the bladder when the operation was complete, showing that the sphincter vesicæ internus has complete control of the urine, without the aid of the sphincter urethræ, notwithstanding the statements of so many authorities to the contrary. When the accumulation in the bladder becomes greater, the external sphincter is brought into action. This we have been unable to observe, as the extensive operation interferes with this sphincter. If the desire to urinate is strong, the external sphincter is undoubtedly controlled by voluntary effort, but whether or not in mature filling of the bladder it is brought into play by involuntary reflex, is not definitely determined. Emptying the bladder may be prevented, if desirable, when it is filled by voluntary contraction of the sphincter urethræ. The contraction of the bladder is purely an unconscious reflex, taking place through a lumbar center.

Careful dissection fails to show any thickening of muscle around the commencement of the urethra sufficient to constitute a sphincter; the absence of such a sphincter has been especially emphasized by Griffith and can be easily verified by dissection. There are, however, around the urethra, collections of unstriated and striated muscles, which, by their contraction close this canal and check the urinary flow. Thus, the first part of the urethra is surrounded by a muscular coat, consisting of inner longitudinal fibres and an outer, thicker, circular layer continuous with the inner and middle layer of the bladder. There is also a sheet of striped muscle which surrounds the greater part of the urethra, and extends from the level of the entrance of the vasa deferentia into the urethra to within a couple of inches of the inner urinary meatus. In man, the first part of this muscle is represented by a few transverse fibres on the ventral surface of the lower half of the prostate gland, and is known here as the external sphincter of Henle. Around the membranous portion of the urethra the sheet is termed the constrictor urtthræ, and around the penile portion, the accelerator urinæ.

The mechanism of closure of the bladder has been the subject of much discussion. Retention of urine has been variously ascribed to the elastic resistance of the tissues at the neck of the bladder, or to the contraction of the internal sphincter, or to the external sphincter of Henle. Experiments show that the resistance to the outflow of the urine is situated at the neck of the bladder, and must be due either to the tonic contraction of the circular fibres at this point, or to the elastic retraction of this orifice, aided perhaps by the position of the mucous membrane along the whole length of the urethra. Great care must, therefore, be observed in any operation on the neck of the bladder, not to interfere with the zone of control in the act of micturation.

Not only is the sexual function diminished or lost by removal of the prostate, but it is materially interfered with by prostatotomy. From our observation it would appear that the prostate gland is placed over the neck of the bladder as a secondary muscular development. Its greatest bulk is made up of muscular tissue. It has situated within it a small glandular structure; the urinary control is entirely independent of the prostate, as was shown in my cases; for, if the prostate was removed, the urine did not escape, except in cases where the bladder-wall had been torn in liberating or detaching the enlarged prostatic lobe. It is rather an accessory to the sexual function than to the urinary apparatus.

ETIOLOGY

The age at which prostatic enlargement begins is variously estimated. A good many of our best authorities believe that it begins a considerable time before the fiftieth year, and that the earliest manifestations of prostatic hypertrophy are not generally recognized, it being extremely rare in Japan, India, and China, and comparatively frequent in Turkey. Enlargement of the prostate in the negro is rarely found, although, by autopsy, one case has been found in which the middle lobe measured 5 by 7 centimeters, microscopic examination showing marked hyperplasia.

We do not believe that excessive sexual indulgence plays any more part in the enlargement of the prostate than in the production of fibroma of the uterus; and it is well known that, proportionately, fibromata of the uterus are more common in the unmarried than in the married women. Then again, it is markedly absent in such races and nationalties as the Japanese, Chinese, negro and Indian.

Our exact knowledge of the etiology of the enlargement of the prostate may be summed up by saying that we know nothing definite about it.

PATHOLOGY

The benign neoplasms and enlargements of the prostate resemble very closely in their histology, in their mode of development and in their relation to the organ itself, the non-malignant neoplasms of the uterus. First, they are myomata, fibromata, and combinations of these two, principally the combinations and not infrequently there is a generally hypertrophy of the entire gland without any distinct tumor formation, resembling closely the soft, flabby subinvoluted uterus. The enlargements are many times completely incapsulated; in a great majority, however, they are closely connected with the prostatic tissue itself. In the middle lobe they are often pedunculated, rarely intramural, and practically never subcapsular.

Wishard draws particular attention to the mechanical character of the obstruction in hypertrophy of the prostate, and to the direction which the enlarged body takes, i. e., towards the bladder, in the direction of the urethra or in the direction of the rectum, as the case may be; the size in one direction bearing no particular relation to its size in the opposite direction. It interferes more or less with the urinary function, depending upon the direction of the pressure whether it be upon the urethra, bladder, or rectum.

MEDICAL TREATMENT

James R. Hayden strongly favors a conservative palliative treatment, and claims that while it does not cure, it at least prepares the patient better for the operation. His treatment consists of strict dieting, assisted by urotropin in full doses, to render the urine alkaline, but I believe that sodium phosphate would do the work much better, and the administration of hyoscyamus and kava kava, triticum repens and uva ursi, associated daily with rectal injections or hot saline solutions and sitz-baths. However, when operation is resorted to, he favors prostatectomy, either by suprapubic or perineal route.

The development of forceful and scientific procedures in the treatment of prostatic lesions has scarcely kept pace with the development of operative procedures in other fields of surgery. It has, however, though tardily, developed on the same lines with its analogous organ in the female,—the uterus. Surgery of the prostate gland is now rapidly taking definite form on rational mechanic, anatomic, and histologic bases.

During the last quarter of the century the sufferer presented a lamentable picture. Usually a man of great energy, strong mentality, physically robust, indefatigable in his labors, and by these had gained a competence whereby he could spend his declining days in comfort, but prostatic enlargement deprives him of his sleep and the pursuit of pleasure, and suffering intensely from the pain, he sees no ray of hope for relief except in the grave.

Temporary catheterization is resorted to for the relief of the urinary retention, which comes on after some undue exposure, acute illness, traumatism, or what-not, which produces a temporary retention. This should be accomplished with all aseptic precautions, with the greatest gentleness in mechanical manipulations. It can always be accomplished where there is an absence of stricture of the urethra anterior to the prostate. There is no such condition as prostatic stricture. The urethra is always patent in its prostatic portion, and the obstruction offered to the passage of the catheter is the obstruction due to deformity, pockets, prostatic sinuses, and compression of the urethra by encroachments on its movements from various directions by the enlargements or neoplasms in the prostate itself. All these occur on the posterior and lateral portions of the urethra. The anterior portion offers no obstruction. The ideal course of the catheter, therefore, is along the anterior wall of the urethra. It is only a question of proper manipulation, and an estimation of the directions of the canal for the successful accomplishment of the temporary catheterization. In this, force must play no part. It should and can always be accomplished by those of skill and experience, in primary urinary retention, and the patient is, therefore, never forced to an immediate operation on his prostate under these circumstances, because he is then often in an unfavorable condition for operative procedure. The soft rubber, with or without the lead stillet, and the coudee catheter, preferably of large size, are the best instruments to use. In these primary retentions the bladder may be completely emptied.

Continued or chronic retention presents to the surgeon many distinct and different, as well as dangerous, phases. Under these circumstances the bladder is often enormously enlarged; its veins are compressed; its walls anemic from pressure; its arteries are frequently dilated, and advanced pelvic or peripheral renal changes may have taken place. Because of this protracted compression of the combined urinary surfaces, care must be exercised that this pressure is not too suddenly relieved, i. e., that the bladder is not completely emptied; otherwise, we have found by experience that there is immediately a congestion of the urinary surface, often to be followed by a hemorrhage, frequently by shock, chills, fever and death. A chronic sufferer from vesical distention should never have his bladder completely emptied in a primary catheterization.

THE MARBURG EXPERIMENTS*

By C. H. Hunter, M. D.

Professor of the Theory and Practice of Medicine, University of Minnesota.

MINNEAPOLIS

There is possibly no portion of medical literature that excites a keener interest among both surgeons and physicians than that pertaining to tuberculosis. Across the vast and dreary field there breaks now and again such illuminating flames as Lænnec, Villemin and Koch that serve as beacons and inspirations to the horde of workers against this formidable foe of mankind. Von Behring, of Marburg, whose fame as the discoverer of the antidiphtheritic toxine gives him an authoritative standing, possibly offers us such another beacon in the results and implications of his Marburg experiments on cattle.

It is the possibility that not all the members may be familiar with this work of Von Behring which will excuse me, I trust, for this notice of the little brochure that has fallen into my hands during the summer, and also for making translations of some parts thereof for the Society to-night. Our author opens with the statement "that the present publication of the long-continued studies in tuberculosis has for its purpose to enable the reader to form an independent judgment of the scientific foundation of the Marburg plan of combating bovine tuberculosis."

The special work with the end-purpose of combating bovine tuberculosis dates now some seven years back—carried on partly in Berlin and latterly in the very extensive establishments at Marburg. The protecting inoculation method which has been tried at the Marburg Institute, and which will now be carried into practice differs in no way in principle from smallpox protective vaccination. I would not, however, designate the method as vaccination, for vaccine has come to mean a particular virus carried over from the cow to man." The epoch-making significance of Pasteur's work in this special territory of protecting vaccination would justify "Pasteurize" and "Pasteurization," but these words have been preempted for a special method of preserving milk.

Von Behring, therefore, has concluded to speak of Jennerization and Jennerizing "when we will say that an individual has received a protective infection through a modification of the same virus which causes the disease to be combated."

"The study of our cattle histories undoubtedly proves that human, as well as bovine, tubercle-bacilli, can serve to make cattle so far immune that they can stand an inoculation that kills the control animal." It is therefore only right and proper if the word "Jennerization" is limited to the methodical, danger-free and practical protective inoculation, we believe that we possess a protective inoculation which fills these demands.

History-charts of many experiments upon animals are given in the brochure that appear to prove this statement. Of these I have selected two, that of cow No. 8 and the control cow No. 43, and had them copied on these charts which you can see on the walls that you may the better appreciate the nature of the proof that Von Behring offers to sustain his proposition.

The material used to Jennerize cow No. 8 was obtained from the sputum of a consumptive named Riebeling. On the 23d of Oct., 1895, this was inoculated into a guinea-pig, and, after passage through several guinea-pigs, to increase its virulence, into guinea-pig 3267, from whose spleen a pure culture was obtained after 14 days on serum, rich in tubercle-bacilli and known as No. 1. Other cultures were similarly obtained, and likewise known by certain numbers. Cow No. 8 was tested in July, 1901, with tuberculin, from Marburg (25 per cent stronger than Koch's). Then from July to 1902 various of these cultures of human tuberculosis are administered as seen on the chart, intravenously by preference.

Finally on the 16th of January, 1902, 0.025 gr. of a bovine culture is administered intravenously. A like dose is administered in like manner to cow No. 43 also free from tuberculosis.

Now, while cow No. 43, recently purchased and in a tuberculosis-free condition, dies after 29 days with the signs of a subacute lung disease and at section is found with lungs, liver and spleen affected by a wide-spread miliary tuberculosis, cow No. 8 comes through alive after a short fever and a slight passing loss of weight, without any signs of lung disease. A number of animals thus Jennerized were killed at different times thereafter, and the post-mortem findings in the protocols given as negative, so that the process is considered innocuous.

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*Read before the Hennepin County Medical Society, September 1, 1902.

The essay then concludes: "We believe that we can answer the first of the two proposed questions,—Is in this work the experimental proof established that cattle can voluntarily be put into that state of immunity to tuberculosis in such manner that they can carry a tuberculosis infection which is fatal to healthy control cattle?—with yes, to the satisfaction of those readers who have read carefully the tables presented."

The second question of the booklet is as to the identity of bovine and human tuberculosis, which is also answered in the affirmative.

The proposition of our distinguished author is now "to prove with the aid of official veterinarians stationed in the agricultural districts whether young cattle can be so influenced by a comparatively simple and cheap treatment with a selected and properly graded dose of attenuated tubercle-bacilli that they will under the natural conditions of farm life be protected against the destructive effects of tuberculous infection."

EMPYEMA, WITH REPORT OF CASES*

By Emery H. Bayley, M. D.

LAKE CITY, MINN.

No case of empyema had appeared in Dr. W. F. Wilson's or my practice in Lake City until the past winter, and then three of them occurred at the same time; hence I have chosen this topic. We have had, however, a number of cases of pleurisy, but none of them developed into empyemas.

Empyema is a suppurative inflammation of the pleural surfaces. The etiology is—

(a) A sequel to serious pleural effusion, and in children the effusion becomes purulent early, or it may be so from the start.

(b) Secondary to scarletina, pneumonia, tuberculosis, and dysentery.

(c) Follows malignant disease of the thoracic organs.

(d) Follows injury to the ribs, or stabs into the pleural cavity.

The bacteriological organisms most frequently present are the streptococcus, the staphylococcus, diplococcus pneumoniæ, and the tubercle-bacillus.

Empyema may begin with a chill, a high fever, great prostration, or severe pain in the affected side, followed later by profuse perspiration.

The local signs are the same as in pleurisy:

(a) Cough, pain, dyspnea.

(b) Limited movement of the affected side.

(c) Diminished tactile fremitus.

(d) Enlargment of the affected side, and, in the advanced stages, bulging of the ribs, and in children edema over the seat of the effusion. Empymas of the left side are often pulsating, the heart impulse being communicated through the effusion.

(e) Dullness on percussion, and change of dullness as patient changes position.

(f) Displacement of the heart.

A definite diagnosis between a serious pleural effusion and an empyema can be made only by an exploratory aspiration. The point of puncture should be in the mid-axillary line in the fifth intercostal space on the left side, and in the sixth on the right.

Empyema is a serious disease; the outcome is determined by the etiology and influenced by the treatment. The prognosis is more favorable in children than in adults. The treatment is surgical.

Empyema following pneumonia may terminate favorably by one or two aspirations. But should the disease not yield to aspiration, begin drainage within a week, using a large tube, one to two feet long, 3/8 to 1/2 inch in diameter, doubling the tube at the middle, with one-half whole, the other half perforated, the ends coming out at the same point and emptying into a bottle. Thus from the unperforated side of the tube you can tell by suction with a syringe if drainage is perfect. This tube can be used also for irrigation later if desired. In case drainage by tubes proves unsuccessful, resection of one or more ribs is necessary.

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*Read before the Southern Minnesota Medical Association, August 7, 1902.

Extreme caution is demanded at the time of the drainage of an empyemia. A hypodermic of strychnine should precede the anesthetic. Chloroform should be used, and the patient should lie mostly on the well side. The pus should be allowed to escape very slowly, fifteen minutes to one-half hour being required. After putting the patient to bed he should remain inclined toward the well side for a number of hours. In subsequent treatment to facilitate the closure of the empyemic cavity the frequent distention of the lung on the affected side is necessary. This is done by having the patient transfer (by air pressure) water from one bottle to another, the tubes being arranged as in the Wolff's bottle. The diet should be ample and nutritious; and an abundance of air should be supplied to the sick-room. The useful drugs are tr. ferri, chloride, protonuclein, quinine, strychnine, whiskey, and cod liver oil.

In the cases to be reported the only one to make a recovery nearly died from syncope at the time of the rib resection.

Case 1.—Boy, aged four years, previously robust and healthy. When first seen, December 28th, he had a temperature of 103° F.; pulse, 145; respiration, 45, and great prostration. I made a diagnosis of la grippe pneumonia. His condition was bad from the start, so that he had to be nourished and stimulated during the entire period of his illness. At the end of ten days his condition was no better. I could not satisfactorily determine what was the trouble. He had pain in the region of the heart, and the heart area was enlarged and displaced to the right. The child wanted to be bolstered up. A physical examination of the chest was not satisfactory. The left side seemed to be less movable and dull. His condition remained about the same, with no permanent improvement for two months. The temperature was 99-100 F.; pulse, 120; respiration, 30 per minute. The case was seen two to three times a week during the last of January and February. The child took nourishment well, but was becoming very much emaciated.

The last of February I noticed an edematous condition on the left side in the sixth intercostal space, and I concluded this must be a circumscribed, pulsating pleurisy. On March 4th Dr. Wilson and I aspirated. We found pus, and put in a drainage-tube. After this his condition improved, but the drainage-tube came out, and I could not get it back to stay, because the child would cry and force it out. There was a tendency for pus to accumulate, and on March 20th we resected an inch of the sixth rib and put in a drainage-tube. The tube remained until the discharge ceased, which was in two weeks. The child made a good recovery, and was dismissed April 19th. The child is now well.

Case 2.—This case was Dr. W. F. Wilson's, and the notes on the same were written by him.

Girl, aged 3 years. Was called March 9, 1902. The child had been sick three or four days. At first visit the temperature was 103° F.; pulse, 160; respiration, 40. There were signs over the chest of acute pleurisy on left side. A few days later the signs changed to those of pleurisy with effusion. The temperature was running about 100°; pulse, 150; respiration, 40. Remedies were given first with a view of absorbing the effusion, but, the signs persisting, aspiration was resorted to on March 23d, and a large quantity of pus evacuated. As aspiration will sometimes cure an empyemia in children, the case was watched carefully for another week. The temperature, pulse, and respiration were about the same as before the tapping. Signs of fluid again appeared. March 31st we resected a portion of a rib, opened the pleura freely, and put in a drainage-tube of ample size. Not only pus, but sloughs came away.

The day after operation the temperature was normal, pulse 112, respiration 30. Improvement only temporary. Child would not eat, and never would take the kind of nourishment needed. There was no attempt at healing or repair. On April 7th the temperature was 103°; pulse, 160; respiration, 50. The child died April 9th.

Case 3.—Male, age 50, 6 ft. 2 in. tall, narrow chest; had had articular rheumatism four years before, and had suffered years from asthma. On January 14, 1902, I was called and found him suffering from acute pain in the right side below right nipple. He had had a chill; temperature, 102°

F.; respiration, 30. I made a diagnosis of lobar pneumonia in middle and right lower lobes.

Dr. Wilson saw the case the next day, and reported the man much better, and that he probably would make a speedy recovery. I saw him two days later, and thought the disease was running its normal course with everything pointing toward an uneventful recovery, but at the end of ten days it was evident that resolution was not taking place as anticipated; the temperature remaining 100° F., and the affected lobes were not clearing up properly.

From January 25th to February 5th the right wrist and right elbow were swollen. The patient was not doing well. The case seemed to be rheumatic. On February 7th I detected fluid in the right pleural cavity. The fluid increased, and embarrassed the respiration, so that on February 16th we aspirated, drawing off a pint of pus. On February 28th we put in small tubes for drainage, but these were not sufficient, and on March 6th we put in large tubes, one-half inch in diameter. These drained the cavity thoroughly, two or three quarts of bloody pus escaping. These tubes were inserted in mid-axillary line in the fifth intercostal space, and in a few days the pleural cavity became clean; but the patient always had pain in the right side. On March 24th I noticed a bulging, more anterior and lower than the insertion of the tubes. I opened it, and inserted a drainage-tube. This proved to be a small circumscribed empyemia communicating with a lung abscess.

On March 28th consultation was called, and we resected three ribs. The middle lobe of the lung was practically gone. The lower lobe contained little abscesses here and there. The lung showed old tubercular deposits. Gauze was used for drainage, and after the second day repacked daily, but pus continued to form rapidly, and there was no tendency to repair lung tissue.

For some time the patient had spit an abundance of bloody or yellow pus. Twice I had examined for tubercle-bacilli, but found none. There were streptococci and staphylococci in abundance, and also elastic lung tissue. The patient gradually became septic, delirium ensued, and he died April 16th, three months after he was taken sick.

REPORT OF THE MEETING OF A MODERN MEDICAL SOCIETY

As new medical societies are being organized all over the country in accordance with the new plan of the American Medical Association, the medical press is fortunate enough to have in its ranks a man who has been reporting the meetings of city medical societies long enough to be able to give new societies a model plan of conducting a meeting. The report is so well made, that we think it worth while to make room for it in our columns. It is from the pen of F. E. Bunts, Cleveland, and was written for the Medical Gazette of that city.

REPORT OF A CASE

First Surgeon: I have to bring before the members of this society a report of an extremely interesting case of rupture of the liver. The patient was accidentally kicked over a fence by a mule and fell with his right side striking on a nigger-head.

No symptoms developed for twenty-four hours, when the family becoming alarmed at the absence of symptoms, I was called in to see the case, and at once diagnosed a rupture of the liver. The signs were somewhat obscure, but an operation made some thirty-six hours subsequent proved the correctness of my observations. The liver and portal vein were carefully sutured, the abdominal wound closed by four rows of sutures—catgut, silk, silkwormgut and silver wire, respectively—and the patient made an uneventful recovery, the stitches being removed on the seventh day, and the patient returned to his occupation as mule-driver two days later, or nine days from date of operation. In conclusion I would say that the chief points of interest in this case are the accuracy of the diagnosis, as well as of the facts in the case, and the most excellent results following a most hazardous and desperate operation.

Chairman: The most interesting paper of Surgeon ——— is now open for discussion.

Oculist: I am sure we are very much indebted to Surgeon ——— for his most valuable contribution to surgical knowledge, and the case reminds me of a rupture of an eyeball in a well known man about town, following an attempt to watch all the ballet girls at once. In this case I made a careful examination with the ophthalmoscope, finding marked evidence of blepharospasm, posterior synechiæ, choked disc, and external strabismus. The treatment consisted of a prompt removal of the eye. The cure was prompt and uneventful, and up to this date he has not attempted again to attend a ballet performance. In conclusion I again wish to congratulate the author and the society upon his paper.

Gynecologist: The subject under discussion is somewhat out of my line of work, but is a very brilliant result and reminds me of a case of endometritis fungoides complicating a Bartholinian cyst in a patient ninety-six years of age. In this case I removed the uterus and appendages per vaginam after excision of the cyst. She made an uneventful recovery and has since married and feels as young as she did seventy years ago. I thank the doctor for the opportunity which this paper has given me to present this case.

Rhinologist: I cannot allow this opportunity to pass without referring to a case which this valuable report of a rupture of the liver has brought to mind. Some years ago Mary G. snuffed a bean up her nose. A careful inquiry at the time failed to reveal the bean, but yesterday, or two years from the date of first observation, there appeared an unmistakable bean-sprout extending at the anterior nares. I at once diagnosed a sprouting bean and removed it, under cocaine. No untoward effect was produced, the patient making an uneventful recovery. The interesting feature in the case was that the patient came from Boston and had probably been addicted to the bean habit for many years. I congratulate the doctor upon his very able paper.

Neurologist: Rupture of the liver must call to mind of all of us that from such sudden jars we may obtain ruptures of the cerebral sinuses, or hemorrhage into the spinal canal. In a similar case to that related by the doctor, motor paralysis was present from the moment of receipt of shock incident to receipt of check from an outlawed bill. I made the diagnosis without any difficulty and offered to relieve the patient of the exciting cause. This he refused, and his paralysis was recovered from in time to take in the races the next day. Again I wish to congratulate the doctor upon his very elaborate and painstaking paper.

Second Surgeon: I can but indorse everything that the author has said and appreciate fully the value of the paper. I wish to take exceptions, however, to the means of diagnosis and to say that from the symptoms related there could not possibly have been a rupture of the liver—nor could he, in my estimation, have sewn up the portal vein without seriously interfering with the functions of the liver and bringing on an attack of the piles. In all cases of this kind in which I have operated I have made it a point at the same time to dissect out very carefully the pile-bearing area. In conclusion, Mr. Chairman, I would say that I hope no one will think from my remarks that I differ in any essentials from the practice of my distinguished confrere.

Orthopedist: During my connection with the Hospital for Cripples I noticed very often and have the records of 150 cases which show the difference in appreciation of pain in different children. In some of the cases of kyphosis a plaster bandage was well tolerated, notwithstanding the formation of decubital sores, extending down to and laying open the spine—while in others bitter complaint was made by the patient and it was necessary to remove the plaster and apply it according to an original method devised by me. The resemblance between these cases and that related in the paper this evening is very marked, and I appreciate the value of this addition to medical knowledge as confirmatory of my own experience at the Hospital of Cripples.

Chairman: As there is no further discussion upon this paper, I would say that we are all very much pleased by the elaborate and carefully prepared discussion which it has called forth—and I will ask Surgeon ——— to close the discussion.

Surgeon ———: The field of surgery has been so fully covered that I feel it impossible for me to add anything to that which has been already said.

ANESTHETICS

Translated for the Lancet

"Scares" and even deaths in narcosis are frequent enough to give us pause, and to cause us to take heed of the advice of those of large experience. Von Mikulicz, formerly so long in Billroth's clinic and now of Breslau, gives an exhaustive study of anesthetics and anesthesia in a recent number of Die Deutsche Klinik. He says:

We have spoken of the most important points which make for and against both inhalation narcotics, chloroform and ether. We will now put them together once again in short.

As advantages for chloroform narcosis are to be brought forward—

1. The relatively small amount of the medicament necessary for the narcosis.
2. The simple and comfortable technic of the narcosis.
3. The absence of irritative symptoms on the part of the mucous membranes.

The disadvantages are—

1. The narrow limits of the narcosis zone, i. e., the great danger to life from the least overdosing of the patient. ,
2. The immediate damaging effect upon the heart-action.
3. The damaging after effects to the heart, liver, and kidneys.
4. The greater frequency and greater intensity of nausea.

We are not in doubt that the disadvantages outweigh the advantages, and we are obliged therefore to look upon chloroform as indeed a comfortable but a dangerous anesthetic. The disadvantage of ether narcosis lies chiefly in its uncomfortable technic. This should not, however, prevent us from preferring it on every possible occasion to chloroform. Ether narcosis must be the normal experience; chloroform must be reserved for the exceptional cases, in which, as we have said, ether is contraindicated. I was for years together a convinced adherent of chloroform. I used it with all its disadvantages as a necessary, unavoidable evil, but I must confess that by every narcosis, even in the simplest operation, I was filled with a certain unrest, and that I never failed to watch carefully the narcosis. I have happily witnessed only a few chloroform deaths. The scenes lived through of a single case have always remained with me a sad memory. Almost still more than these frightful experiences which one looks on as unfortunate accidents liable to happen to any one, have the many asphyxias disturbed me, which at times happen in a frightful manner. Even if the restorative methods were successful, still there remained a certain anxiety with all concerned, which to me at least made operating almost unbearable.

Ether narcosis is not without danger, but its accidents do not come with that unreckoned, almost lightning-like manner, as with chloroform, and this consciousness lends a certain feeling of security to the operator.

The drop-method—the Schemmelbusch mask and dropper—12 to 60 drops a minute—the real drop method steadfastly adhered to, is the only method countenanced. [By the way, the best worded description of chloroform narcosis ever printed, according to the notions of the translator, is that given by Miss Alice Magaw, of Rochester, Minn. A copy of this should be posted on the wall of every operating-room in this city where chloroform is used so much. Every interne should learn it by heart, and then be made to follow its injunctions. Fewer accidents would certainly result.]

For ether narcosis the preference is given to Juillard's mask—a wire frame carrying layers of gauze and completely covering the face, excluding the air.

The contraindications to ether in lung disease — tuberculosis chiefly — are emphasized, and warnings not always heeded. Altogether, the impression is carried that narcosis is a dangerous affair, at best, demanding the undivided and intelligent attention of one person, which is right.

NO MORE PUERPERAL FEVER

In conclusion I wish to state emphatically that "puerperal fevers" will practically disappear when doctors, nurses and midwives learn that the woman in labor and immediately after should be treated upon the same rules of antisepsis as govern the surgeon in the most extensive operation.—Emory Lanphear, M. D., LL. D., St. Louis.

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VIRCHOW

Prof. Rudolph Virchow was born in Schivelbein, Pomerania, Oct. 13, 1821, and was eighty-one at the time of his death, which occurred in Berlin on the fifth day of last month. He was one of the most remarkable and venerated men of the century—a man of varied attainments, prominent as a pathologist, anthropologist, teacher, and parliamentarian.

He was the first scientist who recognized and appreciated the discovery of the self-propagating power of the animal cell. Although not the original discoverer of the cell, he was the one to demonstrate its power of propagating and multiplying itself within an individual; whatever outside of a cell acts upon it, works a mechanical or chemical change within it, which change is disorder or disease.

The localization of disease, he fixed in the cell itself, and thus laid the foundation for the study of bacteriology.

As an anthropologist he was an authority. His researches in this line were tremendous, and led him into the search for buried cities to enable him to prove his anthropological theories.

As a teacher he was earnest and fascinating, yet not a brilliant talker, but interesting from his knowledge of facts. He was for years director of the Pathological Institute in Berlin, but he was never a practitioner of medicine.

His interest in municipal affairs and his power as a parliamentarian made him prominent in the affairs of his country, and he stood as the most striking example of the man of medical science who believed that his duty was not for himself alone, but to his state and its government. So influential was he in municipal councils that in 1865 Prince Bismarck challenged him to a duel.

He served as a member of the reichstag for many years, and became powerful by his fearless honesty and force.

His funeral was a public one and he was honored as a man, a scientist, and a public benefactor.

No one man can fill his place, nor is there need for it, as his investigations were of such a nature that many have followed in his footsteps, and will carry on the work in which he was so successful.

SOCIETY DISCUSSIONS

Attention is called to a clipping in another column, from the Cleveland Medical Journal, in which the writer gives a satirical and exaggerated report of a society proceeding. The article is well worth reading, as it teaches a lesson and suggests a criticism. It should not, however, discourage discussion of any paper of merit.

Occasionally a wave of resentment or embarrassment sweeps over a medical society meeting that, if the discussion were printed, the whole thing would be laughable. Undoubtedly there are times when a paper may be properly received, and no discussion follow. The report of an unique case, an unusual operation, or a rare disease, is given only that it may be recorded for reference. Again, a man may read a paper in which he extols his ability, or magnifies the importance of his clinic. A fellow member not to be outdone by such presumption suddenly calls to mind something rare in his experience, and does not hesitate to go into details that may be a trifle more interesting, and thus the discussion becomes a self-praise meeting.

The article referred to calls attention particularly to the tendency to wander far from the subject of the paper. Such discussions should be discountenanced by the presiding officer. It is not an easy matter for every one to discuss the essentials of a paper unless he is trained by experience. Such members should be encouraged to speak, but to speak to the point, that they may add to the value of the records. The discussions published under the subject matter of the paper are interesting and profitable reading to those who are seeking enlightment on principles of diagnosis and treatment.

The tendency is to generalize rather than specialize the important features that the author has sought to bring out. It is occasionally a compliment to the writer of a good paper to know that his paper is listened to in dignified silence, and does not excite useless comment or valueless discussion. No one likes to read a paper on a rare case without some comment, yet an intelligent inquiry from someone who desires further information is more acceptable than flattery or faint praise.

ORGANIZATION OF OSTEOPATHS

The annual meeting of the State Osteopathic Association was held at the Windsor Hotel, St. Paul, last month. New practitioners to the number of twenty-two were accepted as members.

The outlines of the wants of the Osteopaths are as follows: "The right to sign birth and death certificates as legal physicians; to be made safe from criminal prosecutions based solely upon practicing Osteopathy; to have the same privileges in courts of law and in relation to public duties as other physicians."

These demands are simple and as simply secured, for they place the Osteopath on the same footing as physicians. The proper way to secure them is to take the same examination as the physician is required to pass, and thus secure all privileges granted by law to physicians. These people practically call themselves physicians, and are gradually assuming the rights of physicians. by suggesting and advising remedies used by physicians. They see their limitations, and are anxious to widen them, yet they have not been willing to pull themselves up to the level of the physician. The same old bitterness must be repeated in the coming legislature unless the Osteopath is willing to avoid it by passing the required examination.

One other, and perhaps better, way to equalize the differences is to establish schools for the training of operators in massage and Swedish movements. Give them a course of instruction in the fundamental branches of medicine, and train them in the practical work, and send them out under the guidance and direction of the physician.

Students can be as well or better trained than in the schools of Osteopathy, and will go out as operators who will not assume to treat everything in the category of disease. The physician will select cases suitable for Kinetotherapy, and will send and direct operators skilled in the work. The public will become educated to the difference, and will more willingly accept the recommendation of the physician.

Osteopathy has been of some service to the medical profession: it has wakened us to the fact that massage and Swedish movements are valuable aids, but not specifics, in treatment.

HOSPITAL IMPROVEMENTS

The Northwestern Hospital reopened its doors September 15. The two months in which it has been closed were devoted to repairs and improvements. Its new and sanitary plumbing, all over the house from the basement to the third floor, is a model of the plumber's art. Hard-wood floors have been put into all rooms, wards, and halls; and all other woodwork has been repainted, and the walls newly decorated.

The operating-room and the adjoining room for anesthesia have been enlarged, and a gallery for the accommodation of twenty-five on-lookers was erected, the entire room being finished in white enamel. An elevator is to be placed in the centre of the building for the comfort of patients and employees.

The cost of the remodeling was between eight and nine thousand dollars. The final result is a new, modern, sanitary, and comfortable hospital.

The surgeons have postponed their operations as far as possible until the building was fully ready for occupancy. Everything for the convenience of the surgeon is new, and now the best results may be obtained.

Many of the private rooms have been refurnished by individuals who have always been solicitous for the hospital's welfare.

The physician needs a society more than the society needs him.

REPORTS OF SOCIETIES

HENNEPIN COUNTY MEDICAL SOCIETY

F. A. Knights, M. D., Secretary

A regular stated meeting of the Hennepin County Medical Society was held at the society's rooms in the Andrus Building, Sept. 1, 1902, the president, Dr. J. W. Bell, in the chair. About 40 members were present, including Drs. Staples, Cockburn, Brown, Weston, W. A. Hall, Thos. S. Roberts, J. Clark Stewart, Erdman, Kelsey, Rutledge, Wiig, Byrnes, Hvoslef, Ames, Haggard, Law, Mann, Newhart, Murray, Litzenberg, Thomas, Condit, Bracken, Mead, McCollom, Hill, Chapman, Dunn, Rees, Nippert, L. W. Day, Bissell, Crum, Woodworth, Kennedy; and Drs. P. M. Hall, W. E. Leonard and Henry Hutchinson (St. Paul), as visitors.

Dr. W. H. Condit reported for committee on the furnishing of coat-room that work would be completed in a few days. Dr. Bracken read a paper, "A Safe Milk-Supply" which was discussed with interest. (See the Lancet Sept. 15). Dr. Hutchinson of the State Board of Health, Dr. P. M. Hall, Health Commissioner of Minneapolis, Dr. W. E. Leonard, of local health board, took part in discussion, as did Dr. Kelsey, Dr. Brown, Dr. T. S. Roberts, Dr. Weston, and Dr. Day. Dr. Bracken closed the debate.

Dr. C. H. Hunter had prepared a paper entitled "The Marburg Experiments," but was not able to be present. The paper was therefore read by Dr. Jane Kennedy, and is published in this issue of the Lancet.

Dr. L. W. Day moved that a committee of three be appointed by the chair to carry out a suggestion in Dr. Bracken's paper, and act in conjunction with the State Board to provide a certified-milk supply. The motion received a second, and was debated. Dr. C. A. McCollom moved an amendment providing for a clean supply. The amendment was supported, and being put was lost. The original motion was then put and carried. The president took the matter under advisement. The treasurer presented his annual report, which was approved by Dr. Head, Dr. Rees, and Dr. Newhart, the auditing committee.

The Society then adjourned.

BOOK NOTICES

Grayson's Laryngology. A Treatise on the Diseases of the Throat, Nose, and the associated affections of the Ear. By Charles P. Grayson, M. D., Lecturer on and Instructor in Laryngology, in the Medical Department, University of Pennsylvania. In one Octavo Volume of 540 pages, with 129 engravings and 8 colored plates. Cloth, $3.50, net. Philadelphia and New York: Lea Brothers & Co.

This is a well-gotten up book, containing 534 pages, and enough cuts and engravings to thoroughly illustrate all that is necessary. The book is especially designed for the general practitioner, and the author has made it his aim to outline for every disease a concise line of treatment, selecting in each instance whatever seems to him to be the best. This makes the work of much more value to the one seeking information than if a large number of formulæ were given with the suggestion that "any one of these may be tried."

The author is especially fortunate in being able to express himself in concise and clear language. He devotes considerable attention to the general system, in giving the etilogy and treatment of the different diseases, wherein he differs from most authors of works on the ear, nose, and throat. For instance, in his discussion on the treatment of hay-fever, he lays much stress on the causes other than local; such as "irregularities connected with the patient's hours for meals, for work, rest, and play; indiscretions of diet, lack of exercise, objectional fancies of clothing and bathing, and, finally, vicious excesses." He says: "Everything that will lessen in any degree the patient's vitality and vigor must be removed from the scheme of life, and everything that will contribute to his physical and, more particularly, his nutritive and nervous welfare must be added." The reviewer believes that the author has gotten nearer the facts in the causation of this disease when he attributes them to these general conditions, than when any suggestion of local disease is made; for while there is no question that some cases are cured by the removal of polypi, etc., by far the greater number of cases are not benefited in the least by local treatment, and those who do not recognize the general character of this disease show themselves to be rhinologists, pure and simple, who must see everything through the nose. Dr. Grayson is not of this kind and his familiarity with general practice is evident.

The plates illustrating the sinuses connected with the nose are excellent, and will prove a great aid in the study of the diseases of these parts.

There is too little space devoted to the ear to enable the author to thoroughly cover all of the affections of this organ, but it probably covers everything that the general practitioner will care to handle. The principal value of the work, however, is that part devoted to the nose and throat, and the practitioner who desires to know what to do for his patients suffering with nose and throat affections will feel well satisfied when he refers to this book.

F. C. TODD.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS. Comprising Ten Volumes on The Year's Progress in Medicine and Surgery. Issued Monthly Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VIII., Pediatrics and Orthopedic Surgery, Edited by W. S. Christopher, M. D., John Ridlon, A. M., M. D., Samuel J. Walker, A. B., M. D. Chicago: The Year-Book Publishers.

This volume of the series of ten consists of one hundred and fifty-seven pages devoted to pediatrics, and sixty-five to orthopedics.

The author of the article on pediatrics first sets up a rather elaborate classification of his general subject and then arranges the abstracts from current literature under this classification. This system seems very satisfactory, and the writer has found a great fund of literature on his subject. I question, however, whether the busy practitioner does not prefer less general abstracting with fuller presentation of the few papers chosen by the reviewer as substantial additions to the literature of subjects discussed. Both plans of covering the literature of a subject have their advantages, but the latter I think appeals to most of us who don't care to wade through everything written, even in abstract, and would like a competent endorsement of what is best worth reading.

In the last sixty-five pages of the volume Dr. Ridlon has adopted the latter plan with noticeably good results. His introductory note is, I think, important as summing up what a year-book should contain. Among the noteworthy articles quoted at length are Goldthwaite's work on osteo-arthritic spine, Stern and Reeves on congenital dislocations of the hip, and a number of authors on the unsatisfactory topic of lateral curvature of the spine.

"Painful affections of the feet" come in for an extensive discussion with many abstracts, and tendon-grafting is given considerable space, with an abstract of Elting's very complete review of the subject.

All in all, it seems that the author of the orthopedic section of this work should be congratulated for the amount of valuable information he has so happily condensed in the small space used in the volume.

J. CLARK STEWART.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society in London; one time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians; etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Volume II. June, 1902. Surgery of the Abdomen, Including Hernia—Gynecology—Diseases of the Blood and Ductless Glands. The Hemorrhagic Diseases, Metabolic Diseases—Ophthalmology. Lea Brothers & Co., Philadelphia and New York, 1902.

On the subject of penetrating shot wounds of the abdomen New Orleans has most to say. For some reason the hospitals of that city receive an extraordinary number of patients with abdominal wounds. The question of operation vs. conservative, i. e., let-alone treatment is far from settled. At least no statistics show that more die with operation than without, and as long as this is true, it is the strongest kind of argument for operation, as there is no question that there is gain in operating upon some cases, the impossible thing being to tell beforehand just what cases can be benefited.

Cabot, of Boston, thinks that Courvoisier's law with reference to distention of the gall-bladder is neglected in this country. He gives statistics from Boston Hospitals to support the law.

Edebohls describes the technique of the operation used by him for fixation of the kidneys. He says nothing, however, about stripping the capsule for chronic nephritis.

Under the head gynecology there is a free discussion of the value of different methods of dealing with pus in the pelvis. In the treatment of uterine hemorrhage there is liberal mention of the new drug stypticin. The importance of the study of the blood is constantly receiving wider recognition. The relation of the number of leucocytes to lesions of the internal organs is undergoing sharp scrutiny, and the rules laid down for drawing diagnostic inferences from the blood count constantly grow more accurate.

MISCELLANY

VAPOR AND VERBIAGE

Some student of morbid psychology should set himself the task of making an exposition of the present American mania for haziness of thought and emotion, concealed under an equally nebulous verbosity. So frightful in extent and passion is this furious intoxication that its bombast and nonsense should not allow us to forget that the drunken orgy must be well paid for. There are thousands of people and hundreds of books and periodicals devoted to the awful art of self-deception by means of diseased introspection and self-consciousness, coupled with an amazing pouring forth of meaningless, grammarless, and magniloquent words. It is also startling to notice how such rubbish is finding its way into periodicals whose editors at last find themselves incapable of longer resistance. Take as an instance several articles in a recent number of the *Medico-Legal Journal.* One comes upon whole pages in reading which he wonders if the crazy phantasmagoria of fantastic images and words could have any meaning even to the writers. Philologists will also notice that there is the same soaring away from accepted custom and law in the use of words, as there is in every other department of thought. *Illapse, mesmerizee, menticulture, erythismic, curtained* (of an actor called before the curtain), *spiritualization of the physical,* and hundreds of such terms, the seeming products of hashish dreames, or of the katzenjammer that follows them, meet us in these strange writings. We ask in all seriousness if much of this is not in reality the result of cocainomania or some other form of drug-drunkenness. Sane minds do not act in this way. An article in the latest issue of the *Review of Reviews* on "The New Thought," or "The New Metaphysical Movement," tells us about "circles of silent unity," "mental science temples," "divine scientists," etc. But in all this jargon of the wild-eyed we find that antimedicine and antiscience is, as they would write, "the energizing principle." Mr. Tyner says that "their one aim and teaching is healing—not simply the curing of physical disorders, but that larger gospel of health that includes the comforting of the afflicted and the binding up of the broken-hearted." One of these "mesmerizees," who signs himself Dr., and who describes his doings with his patients, says "by the method of subliminal presentation" he "elevates himself above the plane of the material and the transient and becomes insensible to accusation and insult, immune to the toxin of resentment." The fact is beyond disputing as regards either himself or thousands of other "new physicians" and "new metaphysicians."—The Cleveland Medical Journal.

THE VALUE OF TYPHOID INOCULATION

Surgeon-Major Wright of the Army Medical School at Netley has recently made an exhaustive report on the results of antityphoid inoculations in South Africa. The medical officers urged at the beginning of the war that the opportunity be given to make extensive tests of the efficacy of the typhoid serum, but Lord Wolseley for a long time refused to permit inoculations, and it was only at the urgent solicitation of Lord Lister that he finally gave a grudging consent.

Professor Wright says that the success of the inoculations was unmistakable, for both the morbidity and the mortality were much less among the inoculated than among those who had refused to submit to the experiment. In proof of this claim he adduces the statistics of the garrison at Ladysmith. According to the summary of the report cabled to The Sun, of the 12,234 composing the garrison there, all of whom were exposed equally to typhoid infection, 1,705 submitted themselves to inoculation.

In the period from November 2, 1899, until February 2, 1900, there were 1,489 cases of typhoid among those who had not been inoculated, and only thirty-five among those who had been inoculated, instead of about 250, which would have been their due proportion. There were eight deaths among those who had been inoculated to 329 among those who had not been inoculated. The death rates of the two groups were respectively .047 and 3.12. As a result of the diminished mortality, superadded to the diminution of incidence of the fever, is claimed that the reduction of mortality from typhoid amounted to a fourfold reduction.

These statistics are, doubtless, comforting and cause the hope that the mortality from this scourge of armies may be reduced, but it must be remembered that the experiments cited were made upon soldiers in garrison and not on the march. Men who are marching under a burning sun in a hot and dry country will drink any water they see, no matter how polluted it seems to be *or* is, and not even military discipline will make them cherish their thirst for the twenty or thirty minutes needed to boil the water so as to make it safe. And again, even in garrison, the men who had enough faith in medical science to submit to a protective inoculation would also be much less disposed to disobey the sanitary injunctions laid upon them than would the careless or sceptical uninoculated.—Medical Record.

ABORTIVE TREATMENT OF BOILS

A. Bidder (*British Medical Journal,* June 28, 1902) describes his method of dealing with furunculus, by which he includes those boils which consist of several foci of infection, running together and usually going under the name of carbuncle, but which are not produced by the bacillus anthracis. The method consists of injecting watery solutions of carbolic acid subcutaneously. He inserts his needle, in the case of smaller boils, through the skin at the extreme edge, and in the case of the larger ones (carbuncles) through the hard outer zone, and directs it obliquely toward the indurated tissue. A little of the solution is then injected, and the needle is withdrawn and inserted into another site, where more of the solution is injected, and so on until sufficient has been done; for large boils the whole syringe may be emptied. As a rule, he uses a two per cent solution, and he strongly advises a stout needle. Shortly after the injection—and he finds that one usually suffices—a fair amount of pain appears, but this passes off after a short time. The ultimate results are very satisfactory, and except in cases in which there is much suppuration, very little scarring occurs. He believes that this method is capable of arresting the ineffective process in any stage; in the early ones the necrosing of the tissues is prevented, and in the later stages further necrosis is avoided, and the tissue which has already died is quickly loosened and cast off. He describes the action of the injections as an almost magical one. He discusses the physiological action without arriving at any definite conclusions, and appends the histories of a few of his cases.

APPENDICITIS AS AN AMERICAN DISCOVERY

One of the most familiar features of the traveler from the States who visits this obsolescent old country is the quiet peremptoriness with which he claims everything that strikes him as good as "Amurrican." It may be cheerfully admitted that we do in fact owe many inventions, happy and otherwise, to America. But we really must protest against the assumption which is calmly made by writers in American medical journals, that we owe them the knowledge either of appendicitis or its treatment. It might almost be gathered that some of them believe that the appendix itself is an American discovery. Among James Russell Lowell's less felicitous literary productions is an essay "On a Certain Condescension in Foreigners." Recent events would make one on a certain condescension in American physicians and surgeons towards foreigners singularly appropriate. They have been laying down the law on the treatment of appendicitis to the surgical world in general and to English surgeons in particular with an oracular assurance which shows that the sense of humor which they boast of as a national characteristic remains, in their individual cases, in a state of latency.—London Practitioner.

EPILEPTIC HEADACHE AND EPILEPTIC MELANCHOLIA

M. Mesnard, physician to the hospitals and professeur agrégé at Bordeaux, has drawn the attention of his pupils to the fact that epileptic headache, which is generally nothing more than an aura or prodromic symptom of epliepsy, may in certain instances constitute for years the entire symptomatology of that disease. The diagnosis in such cases is, indeed, difficult, and can only be made by examining rigorously the morbid antecedents of the subject. When a characteristic manifestation is superadded to the headache the clinician is enlightened as to the nature of the malady. When the question remains in doubt, however, M. Mesnard does not hesitate to employ the test of potassium bromide. This remedy is, in fact, efficacious in this form of epilepsy, although larger doses generally are required than in the common forms.

Petit mal, especially when overlooked or untreated, may produce various functional troubles which, like the ordinary symptoms of epilepsy, are ameliorated by potassium bromide. These disturbances are sometimes marked by dyspepsia and at other times by different manifestations of melancholia or neurasthenia. They may predominate over the usual symptoms of epilepsy to such an extent that often the latter are unperceived. Potassium bromide is, nevertheless, indicated, but it will generally be necessary to use it in large doses, by reason, probably, of the state of prolonged fatigue or profound depression of the system of which it seems to be the consequence.—Le Bulletin Médical.

ELEVATING THE STANDARD OF MEDICAL EDUCATION

The manner in which youths are trained for the medical profession in many parts of the United States has long been a source of deep regret to conscientious physicians, as well as a means of lowering the estimation in which the art of medicine and surgery should be held by the general public.

That 6,000 men or more are yearly qualified as physicians and surgeons in this country is in itself an evil of no small import. The supply is greatly in excess of the demand, but the worst feature of the situation is that a large number of these individuals are incompetent to act as doctors by reason of their defective education. Many medical colleges are conducted entirely upon a money-making basis—the production of a well-trained medical man is quite a secondary consideration—the consequence being that a crowd of persons, badly equipped for the important work before them, are yearly permitted by law to practice the healing art upon the ofttimes unsuspecting and confiding layman.

There are signs, however, that the day of the notoriously inefficient medical college is approaching its end, or, at any rate, that such institutions are coming to be regarded with distrust and suspicion. A strong feeling is now abroad, both among members of the medical profession and enlightened laymen, that a physician before being allowed to practice should undergo tests, sufficiently convincing to show that he is capable of benefiting the community at large and of worthily upholding the honor of his craft.

In the first instance entrance examinations should be satisfying and rigid, and it would be to the best interests of all concerned if a law to this effect were enforced in every state of the Union. A uniform entrance examination for the candidates for the medical profession throughout the country is a necessary primary step, and its adoption would doubtless be followed by the raising of the standard of medical education generally. Several states, led by New York, have insisted upon a uniform entrance examination, while others are considering the question. Michigan proposes to establish such a law.

If a law of this nature were made universal—as it certainly will be—most of the superfluous and useless medical colleges must cease to exist, the standard of medical education will be greatly raised, the profession will quickly reach a higher level, and the benefit to mankind will be correspondingly great.—Medical Record.

"For a girl 17, who had experienced a cessation of menstruation for three months, which had been diagnosed by a physician as due to consumption I prescribed Ponca Compound and by the time she had taken two dozen tablets her menses appeared."—C. M. von Langau, M. D., Chicago, Ill.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. J. F. Schefcik, of Glencoe, has removed to Hutchinson, Minn.

Dr. R. J. Jackson, of Wakonda, S. D., has moved to Yankton.

Dr. W. G. Dolan, of Chicago, has begun practice at Cloquet, Minn.

Dr. G. L. Saylor, of Stillwater, Minn., has begun practice in St. Paul Park.

Dr. A. A. Naegeli, of Hutchinson, has removed to Gibbon, Minn., where he formerly practiced.

Dr. Charles W. Fogarty, of Brown's Valley, Minn., has gone East for an extended course of study.

Dr. A. F. Groves, of Brainerd, Minn., who has been sick for several months, has resumed his practice.

Drs. Martha B. Moorhead and Orianna McDaniel have moved to 914 Second Avenue South, Minneapolis.

Dr. A. A. Stemsrud, of Dawson, Minn., has just returned from the East where he has been doing special work.

Dr. L. C. Smith, of Dickinson, N. D., has begun the erection of a hospital building, which will cost about $12,000.

Dr. E. A. Woods has decided to return to Clear Lake, Minn., which place he left some months ago for Litchfield.

Dr. P. U. Laberge, who has practiced a number of years at Grafton, N. D., has removed to Willow City in the same state.

Dr. A. G. Maercklein, a recent graduate of the Wisconsin College of Physicians and Surgeons, has located at Ostrander, Minn.

Dr. J. J. Deertz, of Aberdeen, S. D., has moved to Ipswich, and formed a partnership with Dr. R. R. Hill, of the latter place.

Dr. George R. Curran, of Worthington, Minn., who has ben studying in Europe during the past year, has decided to locate in Mankato.

Dr. Enoch Haugseth, of St. Cloud, is taking care of Dr. Winberg's practice at Lake Park, Minn., during the latter's absence in Europe.

The Clover Leaf Mining Company, of Roubiax, S. D., has erected a small but very complete hospital, which is in charge of Dr. G. H. Rathburn.

Dr. John H. Rishmiller, of Minneapolis, who has been in the hospital several weeks, sick with typhoid fever, expects to be able to resume his practice soon.

Dr. R. J. Cassell, a graduate of the State University, has located at Hutchinson, Minn. After graduation Dr. Cassell spent a year in St. Mary's Hospital of Duluth.

Dr. Gustav Schwyzer, of St. Cloud, has returned from Europe and has decided to locate in Minneapolis. Dr. Schwyzer is a graduate of the University of Zurich.

Dr. L. L. McCurdy, of Madelia, has moved to Brown's Valley, Minn. Dr. McCurdy has practiced a number of years in Madelia and his removal is much regretted.

Dr. Frank H. Stewart has decided not to return to Ada, Minn., where he has practiced a number of years. He will probably locate in one of the large cities of Wisconsin.

Dr. G. R. Pease, of Redwood Falls, Minn., has gone East for two months' special study. Dr. W. E. Belt, of Viroqua, Wis., will take care of Dr. Pease's practice during his absence.

Dr. C. J. Ringnell, of Minneapolis, has returned from the East where he has been doing special work in surgery principally in the New York Policlinic and Postgraduate Schools.

The new St. Luke's Hospital of Duluth, which has been under construction for two years, is now ready for occupancy. The amount spent is $100,000, and the hospital is claimed to be one of the most complete in the country.

The Brown County Medical Society was formed, or reorganized, last month, with the following officers: President, Dr. J. W. B. Wellcome, Jr., of Sleepy Eye; secretary, Dr. A. F. Strickler, of Sleepy Eye; treasurer, Dr. George B. Weiser, of New Ulm.

Dr. A. R. Becker, of Seattle, was in the city last week, the guest of Dr. J. H. Dunn and Dr. R. J. Hill. Dr. Becker is the leading pathologist of the Pacific Coast, and is the only physician west of the Twin Cities devoting his entire time to pathology and bacteriology.

The physicians of McLeod county, Minn., met last month at Hutchinson for the purpose of organizing a county society. A temporary organization was formed, with Dr. Kee Wakefield, of Hutchinson, as chairman, and Dr. F. E. Burch, of Glencoe, as secretary. A permanent organization will be formed at the next meeting.

The physicians of Benton and Stearns counties met in St. Cloud last month, and organized an inter-county medical society, with the following officers: President, Dr. P. A. Hilbert, of Melrose; vice-president, Dr. W. L. Beebe, of St. Cloud; secretary, Dr. J. C. Boehm, of St. Cloud; treasurer, Dr. H. A. Chilgren, of Sauk Rapids.

FOR SALE.

My practice in a village of 1,500 inhabitants about 50 miles from Minneapolis and St. Paul, in the best part of Minnesota. Practice will pay the right man $3,000. Reason for selling is ill health. Practice, including team, buggies, etc., $600. Address M., care N. W. Lancet, Minneapolis.

NORTHWESTERN LANCET

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RECTAL PROLAPSE*

By C. H. Mayo, M. D.

Surgeon to St. Mary's Hospital

ROCHESTER, MINN.

Prolapse of the rectum is fortunately not a common ailment. In children it usually follows an attack of either diarrhea or constipation, and more often partakes of the character of invagination from the sulcus, so frequently found between the anus and outer fold of the prolapse.

The somewhat straighter line of the sacrum and lessened curve of the rectum tend to favor the condition. In these cases cure is usually accomplished by rest in bed and adhesive strapping of the buttocks. The supports are temporarily removed for defecation, which is accomplished in the recumbent position, aided by cold water enemata. Linear scarification may be necessary in obstinate cases, and some employ acid applications.

Rectal prolapse in adults is a very serious affair, and it is with reference to these cases that I have interested myself in this paper. The term anal prolapse is usually limited to those cases which have a prolapse of only mucous membrane with projecting fold of about an inch in length. The rectum has a normal range of movement to accomplish its functions. Its position is maintained by perirectal tissue, fascia, sphincter muscles, the levator ani, and rectrococcygei muscles. The relaxation or giving away of these supports tends to permit of prolapse.

The adult prolapsus recti is composed of all the coats of the bowel, with a projection from three to eight inches from the anal ring, the diameter of the mass being from three to five inches. The projecting mass is continuous with the skin at the anus, and the outer layer does not pass within the anal ring, showing that it is not an invagination. The sphincter ani is so dilated that it lacks all power to aid in the retention of the bowel. These patients describe the condition of the sphincter as being normal previous to the beginning of the disease, and after operation, relieving the condition, the tone of the sphincter gradually returns, which would tend to prove that relaxation of the sphincter is secondary and has but little to do with causing the prolapse.

From the abdominal side it is noticed that the peritoneal fold of the floor of the pelvis is extremely loose, and during the condition of prolapse this peritoneal fold extends completely without the body into the mass, constituting a hernial sac surrounding all but the posterior portion of the rectum. It is possible, therefore, although rare, to have also a hernia in the tumor.

The methods of cure have been numerous, which is an indication of the extreme intractability of the condition. They have been from below by linear scarification, the application of acid, excision of a wedge of bowel and sphincter, excision of protruding mass, posterior attachment of bowel near the coccyx, and the wearing of mechanical support. From above, the methods have been artificial inguinal anus, suture of the bowel to the parietal peritoneum, suture of the mesentery to the parietal peritoneum, suture of folds of mesentery to mesentery, folding the lumen of the bowel into itself longitudinally, and, last, the method which I wish to add, restoration of the peritoneal floor of the pelvis.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

Linear cauterization as advocated by Van Buren has had an extensive application, and for the less severe cases of prolapse has been fairly successful. The knife edge of a Pacquelin cautery is employed to make from four to six three-inch burns parallel with the bowel, but not through the mucous membrane. The cuts penetrate the external sphincter. The result is a contraction and increased rigidity of the bowel and sphincter. Nitric acid or the acid nitrate of mercury is occasionally employed in chosen cases. Under an anesthetic the bowel is dried, and the acid well rubbed into the exposed mucous membrane and rapidly washed off. The method may need repeating, yet frequently proves adequate.

Verneuil and numerous others have anchored the rectum, the rectopexy being by a posterior incision from the anus to the coccyx, the bowel not being opened. Mikulicz has done the most to advance amputation of the mass as a method of cure. A circular incision is made through the outer fold of the prolapse near the anus, and is of sufficient depth to expose the peritoneum, which is completely-closed by a running suture; and the amputation is completed through the inner fold, and the mucous membranes coapted by suture. There are many slight modifications of this procedure. Kay makes the same incisions, but carefully peels back the peritoneal fold, ligating it as a hernial sac, and suturing the mucous incisions. Geo. R. Fowler makes about the same anterior incision, leaving a short cuff of mucous membrane. A short incision is made clear through both walls of the prolapse, and a suture passed on the proximal side of the incision. The suture line is continued entirely around the prolapse. The incision is increased only after each suture is passed, thus making a bloodless amputation, the cuff of mucous membrane covering the suture line. These operations involve, from anatomical conditions, considerable secondary risk from infection.

Rectal Prolapse.

The excision of a wedge of both sphincter and prolapse was frequently employed a few years since. Various apparatus have been devised to support the anus, thus preventing the prolapse. The more common are soft-rubber balls, water pads, and various truss appliances, which are of but little service.

A considerable number of cases have been reported in which inguinal colostomy was made to relieve the difficulty, after the method of Jeannel's colopexia. This is rarely employed now, yet it is an indication of the sufferings of these patients. Anchoring the bowel above in some manner without opening the bowel, is at present growing in favor. Noble sutured to the rectus, but the usual method is to suture to the internal oblique by means of a McBurney gridiron incision. The sutures are of slow absorbing or permanent material, from one-half to three inches of bowel being attached. F. W. Parham, of New Orleans, reports one case of peritoneal suture of the lower sigmoid in a person who was able to produce or reduce his prolapse by voluntary effort, the latter being a rare attainment. George A. Peters, of Toronto, has devised an operation which proved very successful in two cases, one a child, the other an adult. Through a median abdominal incision the anterior wall of the rectum is folded into itself by suture, practically forming two tubes, the posterior being the mucous, the anterior being peritoneal, projecting into the lumen of the bowel. The sutures are interrupted, and commenced as low as can be reached. This narrows and stiffens the rectal wall for a space of three or four inches. In the child the same sutures were also attached to the parietal peritoneum and abdominal wall. The latter attachment was not made in the adult case.

The method which we have found serviceable in St. Mary's Hospital in two cases has been to restore the rectovesical floor in the male, or Douglas' pouch in the female. It is this fold that must form the herinal sac in a prolapse, and is always found so relaxed in these cases. The operation and plan was based upon an earlier operation done after Peters' method, which also proved successful so far as known.

Normally, the distance from the anus to the peritoneal fold is about three and one-half inches in the male, and two and one-half in the female. The peritoneal fold in the floor of the pelvis is shaped much like a horseshoe. The posterior layer covers the anterior and lateral walls of the rectum, then laterally it lines the walls of the pelvis, and it passes anteriorly up over the uterus in the female and the bladder in the male. The peritoneum enfolds the bowel at the level of the third sacral vertebra forming a true mesentery.

By applying numerous sutures of silk or Pagensticker's linen to obliterate the peritoneal fold, catching deeply into the peritoneum in making the folding and, when convenient, catching the front or side wall of the rectal tube, as the suture line rises out of the lower pelvis, a firm support is built in the pelvis from three to five inches in extent, surrounding and attached to the prolapsing bowel. The sigmoid is dropped over the line of sutures in the new pelvic floor as a protection to the sutured surface.

After any radical cure of prolapse, rest in bed for at least three weeks is advisable.

THE STUDY OF INTERNAL MEDICINE*

By J. W. Bell, M. D.

Professor of Physical diagnosis and Clinical Medicine, University of Minnesota.

MINNEAPOLIS

When invited by our worthy Dean to deliver the annual address at the opening of the collegiate year, I accepted, and in that acceptance indicated that I would discuss some of the problems, solved and unsolved, connected with the study of internal medicine. However, before taking up that subject I desire, on behalf of the Faculty of the Department of Medicine, to extend to the student-body a most cordial welcome. Many of you have passed one or more busy and, we trust, profitable years within the walls of this institution, while others are as yet beginners. I sincerely trust you are here to consecrate yourselves to the study of medicine, with a full understanding of the many obligations it imposes.

Before me I see many of the alumni of this college, a body of men and women an older and more pretentious college might well be proud of. I feel sure I voice the sentiment of this faculty when I say, thrice welcome are the alumni. Your encouragement, counsel, and assistance will always be welcome. Your interest in this college, your Alma Mater, is an unselfish one, consequently no other body of men can or will have so much to do with shaping its policy, aiding its development, and determining its future.

It also gives me pleasure to see present busy members of the profession, as well as the many lay friends. We are pleased to witness the growing interest manifested by the profession of the Northwest in this college, a State institution, fostered by State aid, and consequently belonging to the citizens of the State,—an institution in which the profession of the State should feel a keen interest. The profession of the Northwest should clearly understand that this institution exists, not for the aggrandizement of any individual or set of individuals who may happen to be members of its faculty, now or hereafter, but for the sole purpose of educating, in a thorough, practical manner, young men and women for the responsible calling of medicine.

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*Read before the Hennepin County Medical Society, October 6, 1902.

The mission of this college is—

1. The thorough, practical training of the student in the fundamental branches of medicine.
2. The encouragement of original research.
3. Post-graduate instruction.

It is not my intention at this time, to enter into a discussion of what constitutes a complete medical education, farther than to say that the journey of life is too short for any one of us to fully explore, much less master, the broad domain of medicine. Of one thing I am fully persuaded, that is, that four years is too short a time to fit an individual for a specialty; on the contrary, it is barely sufficient to give the industrious student a thorough grounding in the fundamental branches, and prepare him for safe entrance into that higher and broader school of general practice, where, if industrious and observing, he may, in the course of a few years, lay the foundation for a specialty. We are all medical students, or should be, from the day we enter upon the study of medicine until, in the fullness of time, we transfer our unfinished tasks to those who are to follow us.

The principal aim of undergraduate instruction should be to furnish the student a thorough, practical knowledge of the fundamental branches of medicine, so complete in all essentials as to thoroughly fit him for the grave responsibilities of general practice.

As internal medicine can justly claim to be one of the most important of the fundamental branches, I shall offer no apology for selecting it as our topic for discussion this evening.

The present is a transitional period in the history of medical education; especially is this true as regards methods of instruction. The last two decades have witnessed a complete revolution in the scope and methods of laboratory instruction. Instruction in internal medicine can scarcely hope to reach that degree of system and precision possible in the laboratory branches, for reasons apparent to all; and no approach to the systematic laboratory scheme of instruction is possible in internal medicine, without the aid of the well equipped hospital, completely under the control of the teaching body. In order to secure the highest attainable results, the hospital should occupy the same prominent place in the scheme of instruction in internal medicine that the laboratory occupies in the work of the primary branches.

After spending two years in the study, largely of the structure and functions of the normal body, the junior student is initiated by way of internal medicine into the mysteries of the body diseased.

While holding that the instruction in internal medicine should be largely clinical or semiclinical in character, I still believe that the didactic lecture, by the experienced teacher capable of culling and presenting the essentials in a clear, concise and logical manner, will always find a place in the college curriculum, for no other system of instruction can be wholly substituted for it, provided the student takes full notes and properly utilizes them. While granting the strictly didactic lecture a place in the course of instruction in internal medicine, I think it should give way largely to clinical or semiclinical instruction, with the view of fixing the student's mind upon the disabled human machine which he is studying and investigating, with a view of repairing it and keeping it in repair.

Presuming that you have carefully reviewed the applied anatomy of the lungs, heart, and abdominal viscera, prior to the beginning of the session, also that you are familiar with the normal heart and lung sounds, you are prepared to intelligently begin the study of internal medicine. The most natural method of teaching internal medicine is to introduce the junior student, just beginning the study of this important subject, at once to the out patient, for the slightly ill dispensary patient can be examined freely without detriment, but not so the more seriously ill ward patient. Consequently you should spend all the time you can in the dispensary or out-patient department, face to face with the unwashed dispensary patient. You will find it an excellent elementary school for the study of internal diseases. Here you will observe the difference between the walking case of illness, and the more grave form met with in the wards. In the dispensary you will learn to use your senses in an orderly and systematic manner. It is here, by direct contact with the sick, that you are expected to develop the seeing eye, the sensitive touch, and the discriminating ear. Remember that a practical knowledge of disease is possible only by observing its manifestations in the body of the patient.

The whole art of internal medicine consists in being able to inquire intelligently and observe accurately, the phenomena of disease being ascertained wholly by inquiry and observation. The art of intelligent inquiry, so strongly developed in the child, is almost a lost art in the medical student, yet how important to the physician to be able to logically question and cross-question a patient in order to secure a clear, concise history, and bring out subjective symptoms. Hence the junior student should be early and persistently drilled in the art of inquiry, as well as of observation.

Permit me to digress, at this time, for the purpose of directing attention to the value of that old and almost forgotten method known as medical apprenticeship. I know of no experience more valuable to the junior or senior medical student than that to be obtained by spending otherwise unoccupied hours in a busy practitioner's office and clinical laboratory, assisting him in his private and hospital work. You will learn in this way what you cannot learn in any college, hospital, or dispensary, how to successfully manage private patients and how to conduct yourselves in private practice. You should form an alliance, if possible, with an industrious physician; make yourselves useful in the office and laboratory; and thus live, as it were, in a medical atmosphere during your junior and senior years.

Returning to the subject of instruction in internal medicine, what shall be its nature and scope during the third year? It should be elementary, to begin with, the time being devoted for a brief period to the application of anatomy and physiology to practical medicine, more especially with reference to the heart, lungs, and abdominal viscera, using the out patient for demonstration, and books, recitations, and lectures as aids. As a rule but little time is required to master normal diagnosis, provided the student has carefuly reviewed his knowledge of applied anatomy and physiology prior to the opening of the course. The importance of a correct understanding of normal diagnosis cannot be overestimated; for we cannot possibly hope to determine the abnormal unless we are familiar with the normal structure and function.

The second step in the rational study of internal medicine, and the most important to the third-year student, is the practical work in physical diagnosis and clinical microscopy. These two important studies should go hand in hand, and consume a large portion of the time allotted to internal medicine during the third year. Physical diagnosis being the alphabet of internal medicine, it is absolutely necessary that you master the essentials of this important subject:

First.—The technique of the physical methods of examination.

Second.—That you have a clear understanding of the cause, character, and significance of each individual sign.

Third.—That you be able to group and accurately interpret the physical signs present in order to arrive at a correct diagnosis. In this manner you begin as an observer and practitioner of medicine under the guidance of an instructor, and continue as such, until the end of your course, in daily contact with the patient, doing the things, and becoming familiar with the things, you will be called to do later in general practice.

You must not at first expect to clearly make out or correctly interpret every physical sign present in a given case; rather should you endeavor to fix clearly one physical sign at a time, —its cause, character and significance. You must look, feel, and hear for yourselves, and having made your observations you must think and reason upon them, and must learn accurately to interpret their meaning, and draw correct conclusions from them. Remember that your business at first is to observe, not to record; later you will learn what should be recorded, and how it should be arranged for future reference. Juniors should be observers rather than scribes.

Connected with every dispensary and hospital used for teaching purposes should be a well equipped clinical laboratory, in which the student can be systematically taught the methods of examining blood, sputum, urine, feces, etc. Thoroughly trained in the use of the microscope by previous laboratory courses in histology, pathology, and bacteriology, he is prepared to appreciate modern clinical methods of diagnosis.

Hence the absolute necessity for well equipped clinical laboratories open during and immediately following the hours devoted to clinical teaching.

The practical instruction in physical diagnosis and clinical microscopy, at first elementary in character, should pass, step by step, to more advanced instruction, the patient being at all times the object of study, the student making use of carefully selected text-books, lectures, and recitations as side-lights to render more clear the phenomena of disease as manifested in the body of the patient. The student should spend the greater portion of the time allotted to internal medicine in the third year, in the elementary observation-class, physical diagnosis, clinical microscopy, and ward clinics, supplemented by careful text-book reading, lectures, and recitations.

The student of internal medicine, having made good use of his time during the third year, in the out-patient department, clinical laboratory and wards, aided by lectures and recitations, is fully prepared for the more advanced work of the fourth year, which, like that of the third, should consist largely of clinical or semiclinical instruction.

You are now sufficiently advanced to record your own observations, as well as those of your instructor, hence a case-book should be your constant companion. How to take a good history, what to record, and how to record it in a methodical and atractive manner, is an art to be acquired only by careful training and much practice.

During the fourth year the general biweekly clinic hours should be devoted to more advanced instruction, and the senior student be obliged to assume more responsibility in the diagnosis and treatment of the sick. You should be assigned cases in the out-patient department, and, under the supervision of the instructor, have sole charge of the case, visiting the patient when required, recording the clinical course of the disease and the treatment pursued, reporting to your chief. In the wards, when possible, you should pursue a like course under the professor in charge, this method being feasible only in hospitals completely under the control of the college faculty—the only satisfactory teaching hospital. Special subjects should be assigned the students, or a committee of students, who, after careful study and preparation, bring the subject before the section or class for general discussion.

Certain of the more important medico-surgical diseases, occupying the border-line between medicine and surgery, such as appendicitis, gastric cancer, gastric ulcer, abscess of liver, typhoid with threatened perforation, empyema, etc., can best be elucidated by the conference clinic; the internist and surgeon discussing the merits of the case from their respective view points,—diagnosis, prognosis, and treatment.

I know of no form of clinical instruction more valuable to the senior student than the combined medical and surgical clinic, dealing with a class of cases peculiarly trying to the young practitioner in the early years of his practice. The consultation clinic is helpful to the embryonic practitioner, as to his deportment during a conference with a brother physician.

The student, during the fourth year, should carefully note the influence of age upon the manifestations of disease, the marked pathologic and clinical differences observed at the extremes of life; also the necessity for caution in the administration of drugs to the young and old.

The senior student should court the acquaintance and companionship of the sick, in the dispensary and hospital. This leads me to speak of what, for want of a better term, I shall call hospital apprenticeship, in which you seek to spend unoccupied hours in the dispensary or hospital as clinical clerks, anesthetists, dressers, recorders, or on the ambulance,—in fact, in any capacity useful to the hospital and beneficial to yourself.

As senior students you should strive to apply your knowledge of anatomy, physiology, chemistry, bacteriology, and pathology in a practical manner to the solution of clinical problems as you meet with them at the bedside. Do not consider it beneath your dignity to study the subject of feeding the sick or the ventilation of the sick-room, nor entirely disdain the knowledge of how to properly prepare even a mustard plaster.

In your work in this important branch, be punctual, be industrious, be attentive, be courteous, and, more important still, be quiet and orderly in the class-room in order that all may hear distinctly and profit alike.

The time alloted to internal medicine in the college curriculum is so brief, and the magnitude of the subject so great, it behooves you to utilize every moment of time in order that you may grasp the essential facts and principles which form the foundation of a true understanding of internal medicine.

Twentieth century medicine demands that all undergraduate instruction shall be eminently practical. May the Medical Department of the University of Minnesota meet the demand.

SEPTICEMIA AND THE CURETTE

By H. Plympton, M. D.

BROOKLYN, N. Y.

To attempt to break up an old-established custom in any line of life is, at best, a thankless job, and one likely to call down harsh criticism upon the head of the daring iconoclast. To attempt to uproot old prejudices existing in favor of a certain line of practice in surgery, and diametrically to oppose such practice, is to invite, from some, adverse criticism of the harshest kind. The only recompense for this is a logical refutation of, or concurrence in, the argument advanced, on the part of other members of the profession. This latter is what I hope for, and if I provoke a discussion, or start a line of thought in the minds of half of the readers of this article, I shall have achieved all I started out to do.

Curetting the uterus to remove fragments of after-birth or other debris has been taught in our medical schools from time immemorial, and it is firmly fixed in the receptive and retentive mind of every medical student that the first move following any such abnormal uterine condition, is to cleanse the uterus by means of the curette. That the organ should be thoroughly and aseptically cleansed admits of no argument, but that the work should be done with the curette, I deny most emphatically.

The majority of cases of death following the decomposition of fetus or placenta in utero, are caused by the use of the curette, and I hold that septicemia may be avoided if a more rational procedure be resorted to.

The condition of the uterus containing septic matter is one of great congestion, the thickened walls being coated internally and over the os with a thick, brown tenacious mucus. The congestion is active, and therefore the more dangerous in the event of the admission of septic matter into the circulation. If the curette is used, denuding the walls of their protective covering, an immediate vaccination takes place with a septic virus, septicemia following in an incredibly short space of time (chemical metamorphosis is marvelously rapid in the circulatory system), and death quickly ensues. If, without using the currette, we can remove the septic matter from the uterus without disturbing the mucous covering, and enable the uterus of itself to expel the coating, we shall have taken a long step forward in the treatment of this class of uterine cases.

The uterus, by reason of its congestion, may be made to perform a self-cleansing act by exciting the exudation of the serum of the blood into its cavity, thereby washing itself out, and expelling all septic matter instead of absorbing it. This process of exosmosis is induced by a properly combined alkaline solution at a temperature above 100 degrees, and a strict avoidance of bichloride, carbolic acid, formaldehyde, or any antiseptic of an acid reaction or astringent nature, which would coagulate the fibrine and albumen of the blood.

My method of procedure is as follows:

First.—The gentle removal of whatever fragments are lying in the uterine cavity, by means of forceps, care being taken not to tear from the walls any adherent piece.

Second.—The gentle flushing of the uterine cavity with the alkaline solution (110 degrees), the reservoir containing the fluid being not more than two feet above the level of the hips.

If the flushing could be continuously administered for a few hours, say two or three, the conditions would be more speedily reduced to normal, but the discomfort of the position of the patient (on a douche-pan) prevents this, and a flushing once every two hours with one quart of solution is about the limit of treatment. For flushing the uterus, I use a small dilating uterine douche. As there is plenty of room for the escape of the fluid and fragments, there is no danger of fallopian colic or salpingitis.

The first flushing is frequently followed by contractile pains, and expulsion of any previously adherent pieces, together with much of the mucus. A tablet of ext. cannabis indica, gr.¼ and ergotin, gr. ½, every hour till the desired effect is produced, will contract the uterus, and alleviate pain. The bowels should be moved freely, both by enema and catharsis. During the interval between douches the patient should be kept on her back with the hips sufficiently raised to permit the retention in the vagina of as much of the alkaline solution as it will hold.

The rapidity with which this treatment will reduce temperature, relieve pain, stop vomiting, and remove offensive odor, is marvelous to one who has not tried it. Sometimes two flushings are sufficient to cleanse the uterus thoroughly, vaginal douches being all that are needed subsequently to complete the work. Uterine congestion is speedily relieved, and the uterine discharge changes from brown, thick, bad-smelling mucus, to a thin transparent one, accompanied or followed by more or less of a flow of blood. A reduction in the frequency of the flushings is desirable as soon as a tendency to return to normal conditions begins to be observed, as it frequently will within twenty-four hours. Then simple vaginal douches every three hours, with an occasional uterine flushing if symptoms indicate it, will suffice.

The action of exosmosis, and endosmosis, for there is every reason to believe in the absorption of some of the fluid, are what is desired to relieve the existing congestion, as in a bronchitis, pneumonia, congestion of kidney. congestion of any mucous membrane, etc., and is the most rational means of restoring to normal condition.

I do not wish to be understood as decrying the use of that most valuable instrument the curette, but only the abuse of it to-wit: its employment under such conditions as make it practically a sharp weapon loaded with septic matter, and dangerous beyond the poisoned arrow of the Malay or the fang of the cobra, and utterly opposed to our modern ideas of antisepsis.

PROPOSED CONSTITUTION AND BY-LAWS FOR COUNTY MEDICAL SOCIETIES IN MINNESOTA

Dr. W. S. Fullerton, the organizer of county medical societies, appointed by the state society, recommends that the county societies have a uniform constitution and by-laws, and he offers the following as a model:

CONSTITUTION

ARTICLE I—NAME AND TITLE OF THE SOCIETY

The name and title of this organization shall be the................(and) County Medical Society, (and it shall include the Counties..... ....) and shall be the official society of these counties.

ARTICLE II—PURPOSES OF THE SOCIETY

The objects of the Society shall be to bring into one organization all the reputable physicians within its jurisdiction; the interchange of professional experience; the cultivation of the Science and Art of Medicine; the encouragement of professional zeal; and the promotion of harmony and friendly feeling among its members.

ARTICLE III—COMPOSITION

Every physician residing and legally practicing in...................... who is in good professional standing, and who is practicing nonsectarian medicine, shall be eligible for membership.

ARTICLE IV—MEETINGS

Regular meetings shall be held quarterly or oftener, at such time and place as may be determined by the Society.

Article V—Officers

Sec. 1. The officers of this society shall be a President, a Vice-president, a Secretary, a Treasurer, a Board of Censors consisting of three, and State Delegates as may be required by the State Society.

Sec. 2. These officers shall be elected annually, at the annual meeting of the Society, to serve for one year (except the Censors), or until their successors are elected and installed.

Sec. 3. The Censors shall at the first meeting be elected for one, two, and three years, respectively, so that at each annual meeting thereafter there shall be elected one censor for three years.

Article VI—Funds and Expenses

Funds for meeting the expenses of the society shall be raised by entrance fee, annual dues, special assessments, and voluntary contribution. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

Article VIII—Amendments

The Society may amend any article of this constitution by a two-thirds vote of its members at any regular meeting, provided that such amendment shall have been read in open session at two previous regular meetings, and shall have been sent by mail to each member ten days in advance of tne meeting at which final action is to be taken.

BY-LAWS

Chapter I—Membership

Sec. 1. Application for membership shall be made in writing at a regular meeting. All elections for membership shall be by written ballot, and a four-fifths majority of those present shall be necessary for an election. Application for membership by card shall be voted upon in the regular way.

Sec. 2. Any physician residing within the jurisdiction of this Society, who, on account of railway or other means of travel, may wish to hold his membership in another society, may do so by joining this Society and being transferred by card to the society of his choice. The right of decision as to granting such transfer shall be vested in this society.

Sec. 3. No physician from another jurisdiction shall be admitted to membership in this Society except by card.

Sec. 4. No physician from another state while resident therein shall hold active membership in this Society.

Sec. 5. The Society may, at its discretion, elect physicians to honorary membership, but such honorary members shall be exempt from dues.

Sec. 6. Members by card shall not be required to pay an entrance fee to this Society.

Sec. 7. When a member in good standing moves to another county in this or some other state, he shall be entitled to a transfer card to the society into whose jurisdiction he moves, without expense, upon payment of his dues to the date of his removal from this county.

Sec. 8. All active members shall be equally privileged to attend all meetings and take part in all proceedings, and shall be eligible to any office of honor within the gift of the Society, so long as they conform to its constitution and by-laws: provided, that no member under sentence of expulsion or suspension shall take part in any of the proceedings, or be eligible to any office until relieved of such disability.

Chapter II—Meetings

Sec. 1. There shall be quarterly meetings of the Society on the first............in January, April, July and October, of each year. The meeting in January of each year shall be the annual meeting.

Sec. 2. Special meetings may be called by the President upon a request signed by any five members, the purpose of the meeting to be stated therein; and each member shall be notified of the purpose, time and place of such meeting.

Sec. 3. No other business than that for which the meeting is called shall be transacted at a special meeting.

Sec. 4. Five members shall constitute a quorum for the transaction of business.

Chapter III—Officers

Sec. 1. The Officers of the Society shall be elected at the January meeting in each year, which shall be known as the annual meeting. Nominations shall be made by motion, and all elections shall be by ballot. The vote of a majority of all the members present shall be necessary to an election.

Sec. 2. The President shall preside at all meetings of the Society, and perform such other duties as custom and parliamentary usage may require.

Sec. 3. The Vice-president shall assist the President in the performance of his duties, shall preside in his absence, and upon his death, resignation or removal from the county, shall succeed to the presidency.

Sec. 4. The Secretary shall be the chairman of the Committee on Program and Scientific Work. He shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society. He shall keep account of, and promptly turn over to the Treasurer, all funds of the Society which may come into his hands. He shall make and keep a correct list of the members of this Society in good standing, noting of each his correct name, address, place, and date of graduation, and the date of the certificate entitling him to practice medicine; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society, and it shall be his duty to send a copy of such lists, upon blank forms furnished him for that purpose, to the Secretary of the State Association, at the close of the annual meeting for the election of officers in each year. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating, when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the State Association his order on the Treasurer for the annual dues of the Society, of two dollars for each member in good standing whose dues are paid in full up to the date of that annual meeting.

Sec. 5. The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary and members, and shall pay out the same only upon the written order of the Secretary.

Sec. 6. The Board of Censors shall report upon all applications for membership, investigate all complaints of breach of professional ethics, the charges to be furnished the defendant, and he cited to appear before the Board for hearing. The Board shall report its decision to the Society, when its action may be affirmed by a four-fifths vote of the members present.

Sec. 7. The Delegates shall attend and faithfully represent the members of this Society and the profession of this county in the State Society, and shall make a report of the proceedings of that body at the next annual meeting of this Society.

Chapter IV—Committees

The Standing Committees of this Society shall be, an Auditing Committee consisting of two, a Committee on Programme of which the Secretary shall be chairman.

Chapter V—Funds and Expenses

The entrance fee to membership in this Society shall be............dollars. The annual dues for each member of this Society shall be (three) dollars, to be paid on or before the annual meeting for the election of officers in each year. (One) dollar of such dues shall be used to defray the expenses of the Society, and two dollars shall be forwarded by the Secretary, with his annual report, to the State Association. Any member who shall fail to pay his dues for three consecutive years shall be dropped from the roll of membership in this Society and in the State Association; he may, however, be restored to active membership by a two-thirds vote of the members present at any regular meeting, upon the payment of his dues up to the time when his name was dropped from the roll.

Chapter VI—Order of Business

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of the minutes of last meeting.
3. Report of Censors on applications for membership.
4. Election of members.
5. Propositions for membership.
6. Reports of Committees.
7. Unfinished business.
8. Miscellaneous business.
9. Presentation of clinical cases, papers, and discussions.
10. Adjournment.

Chapter VII—Rules of Order

The deliberations of this Society shall be governed by parliamentary usage as contained in Robert's Rules of Order, unless otherwise determined by vote.

Chapter VIII—Amendments

The operation of these by-laws may be suspended at any regular meeting by a unanimous vote. These by-laws may be repealed or amended at any regular meeting by a two-thirds vote therefor, provided, that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

THE DIAGNOSIS OF TUBERCULAR PERITONITIS IN CHILDREN

Kissel (Archiv fur klin, chirurgie, Bd. 65, Heft 2) presents the following conclusions after a study of 54 cases of tubercular peritonitis in children under thirteen years of age:

1. Tubercular peritonitis is more common in children than is usually supposed.

2. It can be laid down as a general rule that all cases of so-called spontaneous ascites are really due to tubercular peritonitis.

3. Not infrequently the exudate in the peritoneal cavity will disappear under general tonic treatment and the child will regain complete health.

4. In the majority of the cases the onset of the disease is imperceptible. The parents first notice that the child becomes pale and thin without apparent cause.

5. The presence of a coincident serous pleurisy is strong confirmatory evidence in the diagnosis of tubercular peritonitis.

6. Thickening of the parietal peritoneum is the most valuable sign in the diagnosis of tubercular peritonitis. This sign can be readily elicited before adhesions have formed by picking up a fold of the anterior abdominal wall and palpating the peritoneum between the thumb and fingers, provided the examiner is accustomed to the palpation of the normal peritoneum.

7. In exudative tubercular peritonitis the fluid obtained by tapping is very rich in albumin and has a high specific gravity.

8. In many patients who present no subjective symptoms and only moderate objective symptoms the whole peritoneum is found covered with a thick layer of tubercular masses.

9. Chronic ascites due to tubercular pericarditis affords the greatest difficulties in differential diagnosis, but this condition is very rarely seen.

10. Only in severe cases does tubercular peritonitis have a severe onset.—Ther. Gazette.

THE CONVEYANCE OF TYPHOID INFECTION

While giving due allowance to the fact that typhoid fever is very often water-borne, M. A. Veeder (Med. Record) thinks that other methods of transmission are not sufficiently considered. The danger of burying typhoid stools in the soil seems to him very great. He believes that there is good evidence that the typhoid bacillus grows to the surface in a mixture of soil and fecal matter, like a fungus in a hot bed and that in this locality it may be a prolific source of infection and that as a result the disease may become endemic, the germs perpetuating themselves from year to year. Several instances are cited, where the possibility of water contamination could be excluded, in which all the evidence pointed toward the contamination of the soil as the source from which the disease was derived. Vegetables eaten raw, such as radishes, lettuce and celery, may be a means of conveying the germ to the stomach. Another method is by dust, blown from infected ground. Flies are recognized as being common carriers of the typhoid bacilli from typhoid stools, exposed in trenches, in public picnic grounds, or in country closets which too often are accessible to flies. The importance of having privies screened and disinfected at proper intervals is referred to. The author inclines to the belief that in cities typhoid fever is more frequently water-borne; in the country, earth-borne. He suggests the possibility that there may be a sporulating stage in which the germs may be carried by sewer gas and other emanations and thinks that this point deserves investigation.

PNEUMONIA IN YOUNG CHILDREN.

Pneumonia in young children can be diagnosticated from other diseases by the following sign: There is a lack of expansion of the subclavicular region independent of the location of the pneumonia lesion. On placing the fingers upon the subclavicular region they are lifted as by a wave on the sound side, while on the other the lack of expansion is evident even in early stages of the disease. In pleurisy and pneumothorax the lack of expansion corresponds with the site of the lesion.—Medical Record.

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DR. KIMBALL'S GIFT TO THE HENNEPIN COUNTY MEDICAL SOCIETY

Dr. H. H. Kimball of Minneapolis has promised an annual sum of one hundred dollars for the purchase of medical literature for the Hennepin County Medical Society. The fund is to be placed in the hands of the library committee, and will be expended for rare editions, monographs and literature of original research.

The generosity of Dr. Kimball is appreciated by the members of the Society, as was demonstrated by comment and congratulatory expressions at the last meeting.

The library is now so extensive that more shelf-room is needed for additional contributions that come in from time to time. If some one else will subscribe to the fund that Dr. Kimball has inaugurated, the officers will provide the necessary reading space. Such contributions are particularly gratifying and show a true medical spirit. No better monument is needed for the perpetuation of the name of a medical man who adds to the spreading of medical knowledge among medical men.

The Society is thankful to Dr. Kimball, and expresses the hope that his years may be many, and that his example may be contagious.

NEWSPAPER MENTION

Evidently some physician in Blue Earth county has been mentioned in the newspapers as attending Mr. So-and-So, and the Blue Earth County Medical Society is endeavoring to instruct the intrepid advertiser in professional ethics.

Recent resolutions adopted by the society regard it unethical for any physician to have his name appear in the secular press in connection with any operation, accidental or emergency surgery, or any case of sickness; yet he is allowed to advertise in the same secular paper by a simple card.

The resolutions also provided for the appointment of a committee to confer with the editors of the newspapers, and to request that they refrain from publishing names of physicians, simply stating that the family physician attended the case.

The committee was instructed to say that in any case of interest to the public the attending physician would cheerfully furnish the necessary facts for publication.

It is questionable if such resolutions are of practical service in the prevention of what seems to be an evil in the eyes of the Blue Earth County medical men. The men at whom such resolutions are aimed will keep before the newspaper public in various ways, through their friends and others, yet protesting outwardly and rejoicing inwardly each time their names appear in the public prints. Unfortunately, it is too true that much information is "too cheerfully" given by the attending physician when a simple, direct, and brief statement is all that is needed even in the most prominent cases. There is no good reason why the illness of a patient should be paraded before the public, who are curious for details and medical gossip. The "friend of the family" who supplies information to the paper is not usually a medical man, neither does the reporter understand many medical terms, and the result is a garbled, false, or unfair report, which is either meaningless or misleading. Under such circumstances it may be necessary for the physician to attempt to clear the atmosphere of cloudy statements, and in his effort to do so his name appears in print—whether it is wise or not, he alone must judge, and not be misjudged by the unknowing. When a patient is suffering or dying from heart, kidney, or arterial disease, and the newspaper gravely announces that the patient is suffering from "nervous prostration," the public may be satisfied by the blanket statement. Nearly every one understands what it means, for who among us has not had nervous prostration?

Very often the physician is in no way responsible for the appearance of his name, neither does he desire to see his name in connection with his cases. To him it should not be a matter of importance. The other man who schemes in every way to bring his name before the public, should be discouraged by fair means. The better way is to pay but little attention to such things, or, if one is very sensitive on the subject, to gently argue with the editor. If this fails, abuse, confuse, and enrage everyone connected with the newspaper office, and the editor will order the name never to appear in print under any circumstances.

ASBURY HOSPITAL

The new building for Asbury is under cover, and work on the interior has been begun. The hospital will not be completed for some time, as the building is a very large one and will require many months to carry out the details of its construction.

One feature, which is very commendable, is the amphitheater for the medical men. The surgeon, arrayed in an immaculate, sterilized robe—"the man behind the knife"—will not be permitted to enter the sacred precincts of the internalist unless by invitation. The room will be used for clinics in internal medicine, and for special clinics not surgical. This arrangement will appeal to physicians and patients as a decided advance in hospital methods. The surgeons will be amply provided with large and small operating-rooms, and a few of the attending surgeons will have operating-rooms reserved exclusively for them.

The opening of the new Asbury will be an event in the medical and surgical circles of Minneapolis.

Dr. C. W. G. Rohrer, in the September number of the Maryland Medical Journal, says that inflammation of the diaphram is a common complication of pneumonia—it involves the muscle substance of the diaphragm and is the cause of the "pleuritic stitch pain."

It is of bacterial origin—the pneumococcus.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

R. O. Beard, M. D., Secretary

The annual meeting of the Academy was held Wednesday evening, October 1, 1902, at the West Hotel, Minneapolis; vice-president, Dr. J. W. Little, in the chair.

Dr. Arnold Schwyzer, of St. Paul, reported upon two cases of thyroid removal as follows:

These two large goitres were recently operated upon. Both were in fleshy women with very short necks. The first case was operated upon Sept. 8, 1902; had dyspnea, marked stridor; the larynx was pushed markedly to the right. Cocain, one per cent, was used for the skin; the rest was done without narcosis, which was not allowed as the dyspnea was so great while handling the large rigid colloid goitre that we had to be ready at any moment for tracheotomy or intubation, which latter I was going to try first with a stomach-tube, as I had done once 13 years ago with success. The left lobe and the greatly enlarged middle lobe, each of which appeared of the size of a fist, were removed, while the right lobe, which was smaller and more normal, was left behind to maintain the function of the gland. A horizontal incision, curved somewhat upward on the left side, was sufficient. The woman left the hospital in a week, on Sept. 15th.

The second case, which was also a large goitre, had its peculiarity and difficulty in that the two lateral lobes and the middle lobe were solidly formed into one mass of numerous small colloid nodes. This made the handling of the goitre more difficult, especially when an intrathoracic lobe had to be freed, which was found buried behind the manubrium sterni. As no lobe could be left, I had to leave the back wall of the whole gland after luxating it out of the neck. While on the left side and to the right the wound healed *per primam,* an abscess occurred in the central portion, a mishap experienced for the first time in my goitre cases. It does not, however, amount to much, as the pulse is this evening 76, and temperature 100 2-5°, on the ninth day after the operation. In this case there was also a marked dyspnea during the operation. A profuse bronchitic secretion has occurred since the operation, though no general narcosis was used.

Dr. W. J. Mayo, of Rochester, presented a paper upon "Malignant Disease of the Gall-bladder and the Bile Ducts." (See p. 355.)

Dr. A. MacLaren, of St. Paul, opened the discussion, and congratulated Dr. Mayo upon his admirable paper. He said that his own experience with carcinoma of the gall-bladder was small, but cited cases exhibiting some details of management. He would say that his observation would place the number of malignant cases among gall-stone cases in general at less than one in twenty.

Dr. J. E. Moore, of Minneapolis, said that he was interested in the writer's remarks upon diagnosis. He thought a differential diagnosis not so easy; he had found nodular masses in merely inflammatory cases.

Dr. Arnold Schwyzer asked for Dr. Mayo's report of cases. He could recall but one case among several cases of gall-bladedr which proved to be malignant.

Dr. Mayo closed the discussion with a recital of cases.

The annual election of officers and committees resulted as follows: for president, Dr. J. Warren Little, of Minneapolis; for vice-president, Dr. Wm. Davis, of St. Paul; for secretary-treasurer, Dr. R. O. Beard, of Minneapolis; for executive committee, Dr. A. J. Gillette, of St. Paul, Dr. W. A. Jones, of Minneapolis, and Dr. J. L. Rothrock, of St. Paul; for governing board, Drs. A. MacLaren, C. G. Weston, F. A. Dunsmoor, J. W. Bell, and Talbot Jones.

HENNEPIN COUNTY MEDICAL SOCIETY

H. A. Knights, M. D., Secretary.

A stated meeting of the Hennepin County Medical Society was held October 6, 1902, at the society's library, in the Andrus Bldg., the president, Dr. J. W. Bell, in the chair. About 45 members were present.

The minutes of the previous meeting were read and approved. The committee on a certified milk-supply made through Dr. Roberts a report of progress; two meetings had been held, and a provisional plan formulated which proposed that this committee be replaced by a milk commission, which should report to this society and issue certificates to dairymen.

For various reasons it was thought best not to have this done by either the local health board or the state health board. This plan is in operation in Philadelphia and New York and other cities.

Dr. Bracken is to ascertain whether the State Health Board will make analyses, and allow the proposed commission to issue certificates, and attend to details. He will submit that question at next meeting of state board.

The Executive Committee reported the fixing of the dues of the society at $5.50 from June of this year to Jan. 1904., this sum not to include dues to the State Medical Society.

Dr. Head reported for the Literary Committee. He urged members to donate unbound periodicals, complete or incomplete volumes, to fill and complete files of the library. He announced also the generous gift of Dr. H. H. Kimball who donates $100 for a special library fund, and proposes to give a like sum yearly. Dr. Head moved that a committee of three be appointed by the chair to draw up a resolution of thanks, and present the same to Dr. Kimball. This motion pervailed, and Dr. Head, Dr. Hunter, and Dr. J. H. Stuart were appointed. It was also moved by Dr. Head that this donation be made a special fund to be known as the Kimball Library Fund, and placed in the hands of the treasurer to be used as the librarian may direct. Motion carried.

Dr. Sweetser presented specimens of bone from the petrous portion of the temporal dislodged by a gunshot wound, and showing on its surface the grooves of the lateral sinus, the case resulting in recovery.

Dr. Chapman read a paper entitled "The Work and Worth of the General Practitioner" which was discussed by Dr. Slagle and Dr. Rees, the discussion being closed by Dr. Chapman.

Dr. H. B. Sweetser then read a paper on "Tetanus, With Report of Two Cases," which was discussed by Drs. Slagle, Jones, Dunn, J. Clark Stewart, and Chapman, the discussion being closed by Dr. Sweetser.

These two papers will appear in a future number of the Lancet.

BOOK NOTICES

Diseases of the Nose, Pharynx, and Ear. By Henry Gradle, M. D., Professor of Ophthalmology and Otology, Northwestern University Medical School, Chicago. Handsome octavo of 547 pages, profusely illustrated, including two full-page plates in colors. Cloth $3.50 net. Philadelphia and London: W. B. Saunders & Co., 1902.

This is a concise, well-written work, embracing the essentials of rhinology, pharyngology and otology. The author has aimed to adapt it to the needs both of the general practitioner and special surgeon. The fact that it has been written by one who for many years has devoted himself to the subject assures us that his statements are founded upon a wide clinical experience.

The book is made up of two sections with a total of forty-seven chapters.

Section I is on "Diseases of the Nasal Passages and Pharynx," and Sec. II is on "Diseases of the Ear." All practical and important subjects—such as Diseases of the Accessory Cavities, nasal polypi, peritonsillar abscess, diseases of the tonsils and pharynx, adenoid vegetations, syphilis of the nose and pharynx, tuberculosis, tumors, influence of nasal and pharyngeal affections upon other parts of the organism, adhesive inflammation of the middle ear, mastoid diseases and their medical and surgical treatment—receive attention in this work, including the most modern methods, so plainly stated that they can be accurately followed, and the superior illustrations, which are numerous, prove an excellent aid to the text.

Many diseases of the nose, pharynx and ear are too often considered by themselves, when they are local manifestations of systemic conditions. This fact the author emphasizes in a special chapter on "General Etiology and Hygiene of Nasal and Pharyngeal Diseases."

Nothing is omitted that can give a clear understanding of the subject, but for popularity, convenience, and usefulness, a special chapter devoted to therapeutics or a formulary added would prove to be of the greatest help, especially to the busy practioner and student.

The book has been compiled upon a systematic plan so as to bring the subjects within a volume not too high in price for the student, and it can be recommended as a full and complete text-book.

Marion A. Mead.

The Principles of Hygiene.—A Practical Manual for Students, Physicians, and Health Officers. By D. H. Bergey, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Octavo volume of 495 pages, illustrated. Cloth, $3.00 net. Philadelphia and London: W. B. Saunders & Company, 1901.

Medical education is developing, among other specialists, specialists in state medicine. It is making not only physicians, but health officers. The relationship which medical men and women bear to the sanitary welfare of every community is increasingly close, and their thorough training in personal and public hygiene becomes important; therefore, there is a demand for better text-books and Professor Bergey's "Principles of Hygiene" is a fine response to the demand. It is excellent at almost all points.

In the discussion of so miscellaneous a subject it is rare to find either author or teacher who can successfully deal with all its phases; but Prof. Bergey's versatility is his charm; he is bacteriologist, dietician, mechanical engineer, and sanitarian in one, and in all efficiently.

His chapters upon "Foods," "The Vital Causes of Disease," "Disinfection," "Sewage Disposal and Water-Supply," are especially valuable, and call upon the functions of the author in every field of hygiene.

The chapter upon "School Hygiene" is inadequate to its very important theme. There is no point at which the subject should be more exhaustively dealt with than at this. The school should be a model of sanitation, because its possibilities of mischief to health are multiplied by the massing of its occupants. It should be an object lesson in hygiene, because it affords the most effective opportunity for the education of the public, at its most plastic period, in the principles of health.

The discussion of the question of clothing is a trifle dogmatic, and here and there indulges in empirical, rather than scientific, precepts.

All in all, the medical student, graduate and non-graduate, has had no better book to guide him in his study of preventive medicine.

R. O. Beard.

MISCELLANY

HOW WOOD WOULD BUILD THE CANAL

American enterprise and modern hygiene embodied in one person—General Wood—startled the world by demonstrating that tropical climate alone is powerless to cause tropical dysentery, cholera, typhoid fever, or yellow fever. This astounding fact seems to be the inevitable conclusion from watching the effect upon a perennial plague spot of enforced cleanliness. The whole world now knows the true relation to health of the climate of Cuba, and also has a better conception than ever before of the pathogenic possibilities of the filthy habits of the Cubans.

Our nation is likely to come again under the observation of the world in a conspicuous way when we build the transisthmian canal at Panama or elsewhere, as may be determined. In the discussions, in print and before congress, upon the possibility or desirability of this canal, the conclusion seems to have been universal that if the task was undertaken it would only be completed at an enormous loss of life to the workers from the diseases incident to the climate—those above mentioned; that white labor could not be employed in the work, or if employed it would be with the understanding of the enormous liability to disease of a high percentage of fatalities. But Wood's sanatory campaign in Cuba has demonstrated the exact reverse of this conclusion, and we have the absolute conviction that under his direction, or that of an equally efficient sanitarian,—if he can be found,—the canal can be built from start to finish with immunity to the entire force from the so-called tropical diseases, further that the cost of the requisite sanatory equipment, including sanatory camps, hygienic water and food, inspection and maintenance, assuming that 1,000 men may be gathered in a single camp, will not exceed $10.00 a man a year.

By the term sanatory camp, we mean camps upon a site selected by the sanatory officer, with provision made for piping to all of its parts an abundant supply of pure water, with proper sewers in all its parts, and with a generous provision of concrete or other impervious covering for the more exposed portions of its soil—to the end that in that camp men may live without infecting or fouling the soil, may eat clean food, drink clean water, and sleep undisturbed by disease-bearing insects. From such camps men would go to their daily tasks fit for their duties; in them tired men would find rest and refreshment from toil, and immunity from disease. Inspection should show that members of the expedition were sound at the beginning, and daily inspection of camps and men would help to preserve such soundness. What more impressive lesson to the world could be given of the value of modern sanitation than the object lesson of a sanatory outfit building the transisthmian canal in defiance of nature and of tropical climate without infection from tropical disease. And who is better fitted for this conspicuous task by training, knowledge and experience than our distinguished and honored confrere General Wood?—Buffalo Medical Journal.

"DOCTOR OF OSTEOPATHY"

Whatever we may think of the osteopaths from a professional viewpoint, there is at least one matter with which they are in accord with the medical profession, Mark Twain and the greater part of the church world, and that is their common-sense view of the fad of Mother Eddyism in general and christian science in particular. There is a little pamphlet published in the interests of the osteopaths entitled, Osteopathic Success, which in a recent issue brands the seeress of the far east as a fraud and her belief as a fake.

An interesting feature—interesting to the medical mind—of the same issue is that portion devoted to clinic cases from the field, wherein are reported some of the cures of osteopathy by several active practitioners who have been decorated with the title and degree of D. O. Four cases will suffice. The first was a goitre on a man of 40.

His mother also had been suffering with a very large one. Assuring him that there was help for him in osteopathic treatment, I took the case, treating him twice a week, and at the expiration of two months the goitre was cured. The lesion consisted of an anterior condition of the fifth cervical vertebra, and a falling of the clavicle.

Here endeth the first lesson in etiology and pathology.

The second case was that of a man who was suddenly "taken with a very weak and irregular beating of the heart. Osteopathic diagnosis revealed an enlarged condition of the liver and lesions in the pneumogastric nerve." Eight treatments cured the gentleman. Then along came the third wonder: a case of diabetes mellitus in which the characteristic symptoms are reported and where osteopathy shines like a shooting star, for a new appetite is discovered. This patient had an "erotic appetite." Osteopathy is entitled to and deserves all the credit for the discovery of this new symptom in diabetes. Anyway, in spite of his erotic appetite, the patient received nine treatments and went back to work. Twelve other treatments cured him. In this case the lesions "were found in the nerve centers of the liver and kidneys."

The fourth case does not give the location of the lesion; but the "patient was most efficiently helped over that critical period in which collapse seemed imminent and started on a new epoch of life with fifteen osteopathic treatments."

From these cases osteopathy appears to be a case of "D. O., D. O., my huckleberry, D. O."—Buffalo Medical Journal.

INFLUENCE OF ALCOHOL UPON THE NATURAL RESISTANCE AGAINST INFECTION.

Goldberg (Centralblatt fur Bakteriologie und Parasitenkunde, 1 Abth., 1901, Vol. xxx, pp. 696, 731) states that as a result of an interesting series of experiments made in the laboratory of Professor Chistovich (Tschistowitsch) the author arrives at the following conclusions:

1. Doves which are naturally immune against anthrax become subject to infection after moderate doses (2 to 3 c. m.) of 40 per cent brandy, which produce only transient alcoholic intoxication, but do not result in the death of the animal.
2. Chronic alcoholic intoxication diminishes the natural resistance of doves against anthrax.
3. Small doses of alcohol repeatedly given to doves infected with fatal doses of a culture of anthrax do not save the life of the bird, and only exceptionally prolong their lives in comparison with control doves; sometimes they cause, apparently, the earlier death of the bird.—American Journal Medical Sciences.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. E. E. Shafer, of Grey Eagle, has moved to Motley, Minn.

Dr. T. E. Hall, of Lanesboro, has removed to Ormsby, Minn.

Dr. O. M. Sattre, of Rice Lake, Wis., is in Chicago doing speciai work.

Dr. W. C. Fawcett, of Drayton, N. D., has located in Starkweather, N. D.

The Brown County Medical Society was reorganized at New Ulm on the 1st.

Dr. O. F. Peterson, of Northwood, N. D., has moved to Gleanor, in the same state.

Dr. F. C. Ewing and Miss Edith Pribble, of Anoka, Minn., were married Sept. 30.

Dr. S. M. Hohf, of Yankton, S. D., has gone to New York to do post-graduate work.

Dr. T. Quigley, of Litchville, N. D., has gone to Chicago for post-graduate work in Rush.

Dr. H. G. Van Beeck, of Hastings, Minn., has gone to New York to do post-graduate work.

Dr. G. J. Coller, who has been sick several months, has returned to his practice in Brookings, S. D.

Dr. Jacob Wellcome, of Sleepy Eye, Minn., expects to spend some time in New York in special work.

Dr. J. A. Freeborn, of Fergus Falls, Minn., is in Chicago taking a special course in eye and ear work.

Dr. M. O. Teigen, who has practiced several years in Minneapolis, has removed to Spicer, Minn.

Dr. J. S. Holbrook, of Mankato, Minn., has entered into partnership with Drs. Andrews and Osborn.

Dr. N. S. Miles, of Bird Island, has removed to Excelsior, Minn., to assist his father in his practice.

It is announced that Drs. Cremer and Claydon, of Red Wing, Minn., will establish a sanitarium in that city.

Dr. A. C. Chadbourne, of Wabasso, Minn., was married on the 7th to Miss Cora Jorgensen, of St. Peter.

Dr. James Blake, of Minneapolis, a recent graduate of the State University, has begun practice in Hopkins.

Dr. Franklin Staples, of Winona, has been dangerously sick, and is now reported to be somewhat better.

Dr. Haldor Holte, of Crookston, Minn., was married Sept. 25 to Miss Henrietta Lunde, of Maplebay, Minn.

Dr. G. D. Moyer, of Montevideo, Minn., has returned to his work from an extended trip to the Pacific Coast.

Dr. J. H. Rishmiller, of Minneapolis, has recovered from an attack of typhoid fever, and has resumed his practice.

Dr. E. S. Davidson, of the Lapointe Indian Agency of Minnesota and Wisconsin, died in Ashland, Wis., on the 4th inst.

Dr. S. S. Farmer, of Fertile, has moved to Beltrami, Minn. Dr. Farmer graduated from Hamline with the class of 1901.

Dr. J. G. Cross, of Rochester, who is going to Germany for a year's study, will devote his time exclusively to internal medicine.

Dr. T. L. F. Armitage, of Princeton, Minn., has a new automobile, but it won't go. There are others on the market quite like it.

Dr. R. L. Murdy, of Aberdeen, S. D., and C. M. Shanley, of N. D., will sail for Europe on the 31st to spend several months in study.

Dr. R. A. Beise, who has practiced a short time in Eagle Bend, has decided to give up medicine and go into the manufacturing business.

The new improvements of the Deaconess' Hospital at Grand Forks, N. D., are about completed, and will double the capacity of the hospital.

Dr. H. McI. Morton, of Minneapolis, is expected home this week from Europe where he has been during the summer doing special work.

Dr. D. E. Seashore, who graduated from the State University this summer, has gone into partnership with Dr. M. S. Jones, Battle Lake, Minn.

Dr. Oscar Stenberg, who has been practicing a few months at Jasper, Minn., has located in North Branch. Dr. Stenberg is a graduate of Trinity, of Toronto.

Dr. G. W. Brown, who has been interne at St. Mary's Hospital, Minneapolis, for a couple of years, has gone to St. Cloud and will be associated with Dr. J. B. Dunn.

Dr. James McLaughlin, who has been in a Minneapolis hospital several weeks sick with typhoid fever, has returned to Benson, Minn., and will soon go East for a long rest.

Dr. B. F. Budworth, who graduated from the State University this summer, has gone to Lidgerwood, N. D., to take charge of the practice of Dr. Shields who is going abroad.

Lidgerwood, N. D., has a new hospital association, of which Dr. E. L. McCutcheon is secretary and Dr. C. M. Shanley, treasurer. A building for the hospital will be erected at once.

Dr. Geo. J. Hanley, a graduate of Bellevue, 1887, has located at Perham, Minn. Dr. Hanley has had a very extensive hospital practice in some of the best hospitals of the East and the West.

The Mower County Medical Society was organized at Austin on the 3d, and the following were chosen officers: President, Dr. Wm. Hollister; vice-president, Dr. W. F. Cobb; secretary, Dr. C. A. Hegge, treasurer, Dr. G. J. Schottler.

The Goodhue County Medical Society has been organized with the following officers: President, Dr. Charles Hill, Pine Island; first vice-president, Dr. B. Jaehnig, Red Wing; second vice-president, Dr. J. A. Gates, Kenyon; secretary and treasurer, Dr. J. V. Anderson, Red Wing.

Dr. Hartwig Runge, of Stillwater, Minn., died on the 5th inst. Dr. Runge had traveled in many countries and had led a life of adventure and usefulness. He was a surgeon in the army of the insurgents that attempted to free Schleswig-Holstein, his native country, and later with the army of Maximilian who invaded Mexico.

Dr. Orianna McDaniel, an assistant in the bacteriological laboratory of the State University, was infected with glanders last month while making an examination of a specimen sent to the laboratory. Much anxiety was felt by the attending physicians, but she is now out of danger.

The Oregon State Medical Society, at its annual meeting last month, elected the following officers for the current year: President, Dr. Henry W. Coe, Portland; vice-president, Dr. F. W. Van Dyke, Grant's Pass; secretary, Dr. A. D. MacKenzie, Portland; treasurer, Dr. Mae Cardwell, Portland.

The daily papers of Duluth gave much space to a description of the auspicious opening of St. Luke's Hospital in that city, which occurred two weeks ago. Nearly 6,000 people attended the reception given in the hospital building. This is indeed auspicious, and shows the good-will of the people toward the enterprise.

The McLeod County Medical Society was organized at Glencoe, Minn., on Oct. 1, with the following officers: President, Dr. Kee Wakefield, Glencoe; Dr. D. W. Bolles, Brownton, vice-president; Dr. Frank Burch, Glencoe, secretary. Drs. Burch and Clark gave the society a lunch at the American House. The local chronicler adds that over one-half the members present had no appendices: the surgeons had done their work.

Dr. A. W. Daniels, of St. Peter, was in Minneapolis last week, and was entertained at the Minneapolis Club by some of the old-time practitioners, who eschew reminiscences aged less than 50. The editor of the LANCET was invited as umpire, and anything within his memory was ruled out. Dr. Daniels at 73 is mentally in the prime of life, and physically can enjoy a day of club life.

NORTHWESTERN LANCET

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THE PATHOLOGY OF TYPHOID FEVER*

By S. Marx White, B. S., M. D.

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MINNEAPOLIS

It is not my purpose in this short paper to review the well known facts concerning the morbid anatomy, pathological histology, and bacteriology of typhoid fever, upon which the modern conception of this affection rests. I shall point out, as well as I can in the short time allotted, the importance of the more recent work, and shall discuss some of its practical bearings with especial reference to its value in diagnosis.

For many points concerning the localization and distribution of B. typhosus during an infection, we have only recent work upon which to depend. The reason for this is twofold:

1. The difficulty of specific determination of this organism has been fully appreciated only within very recent years; and therefore some of the older results must be disregarded.
2. The difficulties surrounding the isolation of B. typhosus, particularly from feces and blood, were formerly unsurmounted, and, though still great, many of the failures to obtain the organism have been shown to be due to faulty technique. It is only by practical recognition of the fact, within the past three years, that shed blood may be strongly bactericidal to certain organisms, among these the typhoid bacillus, that the most valuable results have been obtained in the examination of blood of typhoid-fever patients during life.

A mass of evidence has gradually been accumulated to show that under certain circumstances, B. typhosus may be present in almost any organ or tissue of the body, and may there set up changes, either during the attack or convalescence or at varying periods after all evidence of the primary typhoid infection has disappeared. As organs and regions from which B. typhosus has been isolated, it is necessary only to mention the intestinal contents, intestinal lesions, mesenteric lymph glands, spleen, liver, gall-bladder, kidneys, urine, lung, pleural cavities, central nervous system and membranes, rose spots in skin, bone marrow, and periosteum, as well as those cases in which passage from the maternal circulation to the fetus has been shown, to convince us that we have here, in all probability, a form of infection in which there may be a widespread distribution of the infecting organism.

Thiemach[1], 1895; Besson[2], 1897; Block[3], 1897, collectively obtained the bacillus from the blood in only 2 of 32 cases, but they used only small amounts of culture-media. Schottmüller[4] plating the blood, mixed with agar, got positive results in 40 of 50 cases. Hewlett[5] (20 of 24 cases); Auerbach and Unger[6] (7 of 10 cases); and Castellani[7] (12 of 14 cases,) obtained even better results by mixing blood, obtained with an aseptic syringe from a vein, with large amounts, 200 to 500 c. c., of broth in flasks, thus diluting and diminishing thereby its bactericidal power. Courmont[8] was successful in all of 9 cases. That these results represent not only the fatal but the ordinary and mild cases, is shown in Hewlett's[5] series, where the bacillus was found in the blood in both severe and light cases. Castellani[7], Courmont[8], and others also obtained the bacillus in light cases. Biffi and Galli[9] in a study of thirty mild cases of typhoid fever obtained the typhoid bacillus from the spleen in 27. This seems also proof of its presence in the blood in all cases.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

The experience of Cole[10] was interesting, as he got positive results in 11 of 15 cases. In the last 7 cases he used a much larger amount of nutrient broth for his cultures, and obtained a positive result in each.

Among the cases just referred to, a number are of especial interest from the early stage at which bacilli were found and from the relationship to the Widal reaction. Thus Hewlett[5], in his 20 positive cases, cites Case III, in which blood-cultures were positive on the 5th and 11th days; the Widal reaction negative on these days, but positive on the 13th day. In Case V blood-cultures were positive on the 8th day; Widal negative the 7th, 9th and 12th days, and positive the 15th day; and in Case XV the blood-cultures were positive the 4th and 10th days; the Widal was suggestive the 4th day, and positive the 6th day.

Castellani[7] obtained blood only once in the first week (B. typhosus was present). This was in a mild and atypical case, lasting only two weeks, and without roseolæ or splenic enlargement, in which the Widal was negative throughout. In two other cases, Widal was negative, but cultivations from the blood showed B. typhosus.

In Cole's[10] series of 11 positive cases, he obtained the bacillus in 5 before the Widal reaction was positive. His earliest positive blood-culture was on the 6th day.

Courmont[8], writing of the Lyons epidemic of 1901, states that the cases showed an immense number of tardy serum reactions, and in his 9 cases, all of which gave positive blood-cultures, 4 gave absolutely negative serum reactions, and in 2 blood-cultures were obtained on the 5th and 9th days, respectively, while the serum reaction was negative in one on the 5th, 13th and 15th days, and positive on the 22d day, and, in the others, 6 trials resulted negatively, and a positive result was obtained only after recovery on the 49th day.

Gwyn[11] cites a case in which the Widal was negative until four days after the cultivation of the organism, late in the disease.

It will thus be seen, that in both mild and severe cases of typhoid infection, B. typhosus has been isolated not infrequently before the appearance of the Widal was determined.

It has been evident for some time that, as Gwyn says, "Absence of reaction till late in the course of the 'septicemic' cases is a remarkable but not constant phenomenon." But the above observations, given somewhat in detail, indicate that in many cases of tardy or transient serum reactions, the cultivation of the bacillus from the blood may be of immense value in establishing an early diagnosis, and indeed, in some cases, where the reaction is absent, particularly in severe "septicemic" and in light atypical cases, it may be our only means of establishing the diagnosis on a biological basis. It must not be forgotten that some of the instances of supposed absent reaction where daily tests, carried on into convalescence, have not been made, may be only cases of transient or tardy reaction. It must also be remembered that cases of obscure infection with the so-called paracolon bacillus may have been occasionally included here, owing to our imperfect knowledge of the bacilli related to the typhoid and colon groups.

Not only is it true that the bacilli may be obtained early from the blood, but that they may be distributed by the circulation to points of localization in certain regions, and from these obtained early in pure culture, is now well established. From rose spots, Neufeld[12] obtained B. typhosus in 13 of 14 cases. In 7 of 8 cases, where comparison was made, a diagnosis was possible, on an average, six days before the Widal test was positive.

Curschmann[13] succeeded in 14 of 20 cases, Richardson[14] in 5 of 6, and, in all the latter, six days on an average before a positive Widal was obtained.

The isolation of the bacillus from certain excreta, whilst evidencing their presence at some time in the blood, is not of much diagnostic value, owing to the lateness of their appearance and the difficulties of isolation. It is, however, of immense practical importance from the pathological and hygienic standpoint.

In the urine a large number of studies lead to the conclusion that B. typhosus may be present in from 20 to 30 per cent of all cases, not appearing, as a rule, before the 15th day (Hiss).[15]

Concerning the feces Hiss[15] states as his conclusion, after studying a large number of cases, and with a critical review of the literature, "that the bacilli do not occur in the feces, in numbers at least sufficient for recognition, much before the middle of the second week, or, in other words, about the time the intestinal lesions are well advanced and ulceration is occurring; and in the light of our present statistics on the subject, which may, of course, be modified by subsequent research, it seems most rational to look upon the presence of the organisms in the feces, especially in fair numbers, as indicating an ulcerating condition of the intestine, and that the organisms practically appear and disappear with these lesions, but when the lesions commence to break down, they increase as this process advances, and commence to decrease as the ulcers begin to granulate and heal." Higley[16], in a recent communication, has given the 10th as the average day on which he was successful in obtaining B. typhosus from the feces in 18 cases, and the 12th as the average day on which the Widal reaction in 15 cases was found positive. The earliest day of isolation of B. typhosus from the feces was the 6th.

Just how far the presence of B. typhosus in the gall-bladder affects the intestinal flora, may not, with our present knowledge, be estimated, but this factor may need later to be reckoned with.

Geisler claims to have found B. typhosus in the sweat in one instance, and Edel[17] and Dieudonne[18], in the sputum. Besson[19] reports the recovery of the bacillus from the tonsils of 6 out of 10 cases investigated.

Having considered, though briefly and in a fragmentary way, some of the evidence concerning the distribution and habitat of the typhoid bacillus during human infection, we will now turn to a brief consideration of the nature of the typhoid lesion, and its relationship to the infecting organism. Since investigators have been unsuccessful in producing, by animal inoculation, lesions comparable to those found in man, we must rely in great part for our knowledge of their nature, and relation to the organism, upon a study of human tissues under conditions which cannot readily be controlled. Thus, experimental evidence is lacking to show just how far the bacillus or its toxine, each acting independently, is capable of producing the characteristic reactions on the part of the tissues.

By far the most important recent work on the histology of the typhoid lesions in man is that of Mallory[20]. His work shows that there is produced a proliferation of endothelial cells, which acquire malignant properties, becoming markedly phagocytic. These phagocytic cells are produced most abundantly along the line of absorption from the intestinal tract, both in the lymphatic apparatus and in the blood-vessels, and are almost entirely responsible for the swelling of the lymphoid tissues of the intestine, mesentery, and spleen. These phagocytic cells are found all over the body in lymphatic spaces and vessels, and are produced by distribution of the toxine throughout the general circulation. They may even get into the general circulation, a few at least coming from the abdominal lymphatics through the thoracic duct.

Mallory believes the necrosis of the intestinal lymphoid tissue to be accidental in nature, caused through occlusion of the veins and capillaries by fibrinous thrombi, and that the focal lesions are due almost entirely to the action of the toxine and to embolism by endothelial and phagocytic cells.

His closing paragraph reads: "Histologically, the typhoid process is proliferative, and stands in close relationship to tuberculosis, but the lesions are diffuse and bear no intimate relationship to the typhoid bacillus, while the tubercular process is focal and stands in the closest relationship to the tubercle-bacillus."

Whether the primary incipient changes are due to the absorption of toxines from the intestinal canal, or whether the typhoid bacillus gains entrance to the lymphoid tissue before any lesion, even the most minute, is produced, is of less interest for the moment than the question whether the intestinal lesions are due primarily and perhaps chiefly or entirely to a toxine originating in the intestinal lumen, or whether the bacilli, as well as the toxines, enter the tissues early before pronounced intestinal lesions and ulcerations have occurred.

The view that there is an early bacilliary invasion of the entire lymphatic absorption path, with also a relatively early invasion of the circulating media, both lymph and blood, and that this invasion may take place before ulceration has occurred in the intestine, is favored by the isolation of B. typhosus from the circulating blood as early as the 4th and 5th days of the attack.

That typhoid infection can occur without lesion of the intestinal tract, seems clearly established by Flexner[21], Harris[22], Lartigan[23], and others, but that it is rare and that slight intestinal lesions may be easily overlooked, that the lesions may be in an early stage or may have disappeared at the time of autopsy, while lesions in other portions of the body are still in progress, is emphasized by Opie[24]. Some of the cases of atypical and peculiar infection in which there is a wide-spread distribution of the organism, have even been styled "typhoid septicemia" (Flexner and Harris), "septicemic form of typhoid fever" (de Grandmaison), etc.

That the bacilli may colonize in the tissue during life, be in intimate association with specific lesions, and instrumental to a certain extent in their formation, has received confirmation by the work of E. Fraenkel[25], who has studied by a special technique excised roseolæ from 5 cases, and found the bacilli in colonies in these lesions, which are hyperplastic and, to a certain extent, also degenerative in their nature.

Although many of the complications and sequelæ of typhoid may be due to mixed infection, or not associated with the typhoid bacillus, certain cases have shown that this organism is capable of producing lesions in various tissues, and that some of the lesions may be suppurative or degenerative in type. Thus McClintock[26] collects 19 cases of meningitis due to the typhoid bacillus, and reports one case of brain abscess from which B. typhosus was isolated in pure culture. B. typhosus has been isolated not infrequently from suppurative lesions of bone and periosteum. Cases reported by Unger[27], Bruni[28], and others, leave no doubt that there may be a period after the primary typhoid infection in which the bacillus is lodged in the tissues and is latent, and if this be true, we must concede that these remote, tardy lesions are not purely toxic, but that the bacillus is capable of exerting its action locally, independently of the general, diffuse action of its toxine.

I shall not attempt to elucidate here the relationship between these atypical manifestations and the question of immunity, but I introduce them to show the capacity of the typhoid bacillus for producing lesions locally, and to suggest thereby, in connection with facts already stated, that this organism plays a part aside from the diffuse action of its toxine, in the production of the typical typhoid lesions throughout the body.

CONCLUSIONS

1. The typical typhoid infection is one in which there is an early wide-spread distribution of the B. typhosus, probably in moderate numbers, in the blood and lymph, and a colonization in various tissues.

2. The bacillus produces its chief action on the tissues by means of a mild, diffusable toxine, which induces, primarily, proliferation and phagocytosis, and, secondarily, focal lesions in which necrosis may occur.

3. The bacillus is capable of acting locally, and the presence of the bacterial colonies may be the determining cause in the production of certain lesions during the primary attack and at varying periods thereafter.

4. The early distribution and localization of the bacillus afford us means whereby an early and accurate bacteriological diagnosis may be made when the Widal reaction is delayed or absent, and may possibly afford us a diagnosis in the majority of cases before the Widal reaction appears.

BIBLIOGRAPHY

1. Thiemach.—Ref. Cent. f. Bakt. u. Inf'nk. XVII, 1895, p. 475.
2. Besson.—Rev. de Méd. XVII. 1897, p. 205.
3. Block, E. B.—Bull. J. Hopk. Hosp., VIII, p. 119, June, 1897.
4. Schottmüller.—Deut. Med. Woch., 1900, No. 32.
5. Hewlett, A. W.—Med. Record (N. Y.), Nov. 30, '02, Vol. 60, No. 22. p. 849.
6. Auerbach and Unger.—Deut. Med. Woch., 1900, No. 49.
7. Castellani, A.—Cent. f. Bakt. u. Inf'nk (Orig.), XXXI. No. 10, Apr., '02, p. 477.
8. Courmont, J.—Jour. de Phys. et de Path. Gen., Tome IV. 1-15. Jan., '02, p. 155.
9. Biffi et Galli.—Riv. Crit. di Clin. Med., 1901, No. 2 & 3, Ref. Cent. f. Klin. Med.—1901. Jahrg. 22, p. 553.
10. Cole, R. I.—Bull. of J. Hopk. Hosp., Vol. XII, No. 124, July, 1901.
11. Gwyn, N. B.—J. Hopk. Hosp. Reports, VIII, 1899-1900, p. 385.
12. Neufeld.—Zeit. f. Hyg. XXX 3, p. 499.
13. Curschmann.—Münch. Med. Woch., 1899.
14. Richardson, M. W.—Jour. Bost. Soc. Med. Sci., Vol. IV, 1900, p. 110.
15. Hiss, P. H.—Med. News (N. Y.), May 11, 1901, Vol. 78, No. 19, p. 728.
16. Higley, H. A.—Med. News (N. Y.), Mch. 29, 1902, Vol. 80, No. 13, p. 584.
17. Edel, P.—Fortsch. d. Med., 1901, No. 14.
18. Dieudonne, A.—Cent. f. Bakt. u. Inf'nk, Oct. 15, '01.
19. Besson.—Rev. de Med. XVII, 1897, p. 205.

20 .Mallory, F. B.—Jour. Exper. Med., 1898, Vol. III, p. 612.

21. Flexner, S. J.—Hopk. Hosp. Reports, VIII, p. 242, '99-1900.

22. Flexner and Harris.—Bull. J. Hopk. Hosp., VIII, p. 259, Dec., 1897.

23. Lartigau.—Bull. of J. Hopk. Hosp., 1899, p. 55, also N. Y. Med. Jour. 1899, p. 158.

24. Opie, E. L.—Bull. J. Hopk. Hosp., Vol. XII, No. 124, July, 1901.

25. Fraenkel, E.—Zeit. f. Hyg. u. Inf'nk, Bd. 34, p. 482.

26. McClintock.—Ref. Cent. f. Bakt. u. Inf'nk, XXXI, No. 10, p. 300.

27. Unger, E.—Deut. Med. Woch., 1901. No. 31, p. 522.

28. Bruni, C.—Annal. de l'Inst. Pasteur, X. 1896, p. 220.

Note.—The brevity of this article has not allowed more extended references to the literature, and therefore only the most important articles, or those illustrating certain points, have been referred to.

DISCUSSION

Dr. L. W. Day: I want to thank Dr. White for his splendid paper, bringing our knowledge up to date regarding the pathology of typhoid fever. We are apt to lose sight of that pathology in our search after methods of treatment. I simply want to thank him for what he has suggested.

Dr. Geo. D. Head: I wish to pass around this chart of a very interesting case of typhoid fever. The case started out as a typhoid, and later was complicated with pneumonia, which in turn was complicated with empyema. The empyema was drained. Later on endocarditis developed, and three distinct attacks of nephritis with intervals of two or three weeks; and the boy, 16 years of age, is alive and will recover.

The highest point the temperature reached was 107 2-10 degrees. The patient was reduced to a mere skeleton. The case proves that one should never despair of the life of a sick child. The chart, by the way, shows only a portion of the history.

Dr. Mary S. Whetstone: Did the boy reside in this city for some time; and, if so, in what portion of the city?

Dr. Geo. D. Head: I really cannot say as to that. He did not come into my hands until he was in about the second week of typhoid, and I do not know much about his history, except that his father is a Congregational minister and his name is Harold Nott.

Dr. Mary S. Whetstone: I thought there might be some malaria in the system which might have had something to do with the high temperature.

Dr. Head: In answer to that, I would say that previous to his illness the boy was perfectly well; had never been out of the State, and never had any malarial infection. He gave a Widal reaction, and had rose spots and all the symptoms of typhoid. Pneumonia developed about the twentieth day of his illness.

Dr. A. S. Whetstone: During what time did the temperature rise to 107°?

Dr. Head: During the pneumonia.

Dr. S. M. White (Essayist): I have practically nothing to say in conclusion, except, possibly, this: In bringing out many of the points in the paper it was necessary to discuss the details considerably. I think recent work has shown us the value of bacteriological examination of the blood, not only of typhoid-fever patients, but of patients affected with many other diseases, and further work will be of greater value still. The work done the past two years demonstrates very nicely to-day the limitations of the Widal reaction, on which we place so much reliance. For instance, in some of these cases of typhoid fever in which the Widal reaction was absent throughout, or in which the Widal reaction was not present until late in the course of the disease, a bacteriological examination has enabled a diagnosis to be made in the early part of the second week—even by the middle of the first week—and we all know a knowledge of the disease in its early stages is valuable.

Dr. A. S. Whetstone: Would you say that if the disease is recognized in its early stages, that typhoid fever could be aborted?

Dr. S. M. White: These illustrations have had nothing to do with that phase of the subject, but I believe that in the literature of to-day we have to study we have evidence sufficient to convince us that treatment directed toward the intestinal tract would be ineffective in aborting the disease on account of the early invasion of the tissues and the blood by the micro-organism.

Dr. J. A. Shellenberger, of Philadelphia, suggests the following formula for preserving pathological specimens:

Chloride of sodium ℥iv.
Pulv. alumen. ℥i.
Hydragyri bichloridi gr. ii.
Aq. pura Oii.

M.—In very delicate preparations double the amount of water.

THE WORK AND WORTH OF THE GENERAL PRACTITIONER*

By O. S. Chapman, M. D.

MINNEAPOLIS

I wish to speak to you to-night in regard to the work and worth of the general practitioner, for much has been said and written in recent years concerning specialists and specialism in medicine, while the general practitioner, as such, has had but little place in current medical literature, and yet he it is who must ever continue to bear the major part of the care and responsibility of the profession.

The time was, and it is within the memory of some us when every mature and successful practitioner was considered the authority in all matters pertaining to health and sickness. He is still the medical counsellor of the household, treats most of the acute diseases and many of the chronic, has the care of the parturient, watches the development of children, and does much of the minor surgery. He attends to the hygienic conditions and sanitary surroundings of the individual, makes diligent inquiry concerning his personal and family history, his habits, and mode of life; and yet he does not occupy the same relative position of unquestioned authority as formerly. I trust it is not out of place for me, therefore, to inquire if he is to have a waning influence in the coming years, and to inquire by what means, if any, he can regain lost ground.

Perhaps the principal reason for the general practitioner's having lost ground in some respects in the public mind is because of the advent of specialism in the science and art of medicine. As in other sciences and arts, specialism is inevitable, and not to be deplored, for its advantages far outweigh its disadvantages. Anesthesia and asepsis have enabled the surgeon and gynecologist to do a greatly increased amount of work. The introduction of cocain has been followed by a rapid increase in the nose and throat specialty, and it has facilitated the work of the ophthalmologist. Bacteriology, chemistry, and sanitation have opened many avenues for specialism, and the teaching force in our medical colleges has been greatly enlarged.

It is naturally to be expected that the leaders in thought and in the literature pertaining to the various branches of medicine should be found, in general, among those who devote their time and thought to the study of the respective branches; nevertheless, it would seem that the general practitioner can acknowledge to them no superiority in broad culture or in benefits conferred upon humanity. His wide reading and experience in all branches of medicine tends to a high degree of intellectual activity and a symmetrical development of the mind, although the field is so large that no one man can possibly oversee it all, and bring it into full productiveness. We cannot, therefore, be too thankful to the men who are willing to devote their time and energies to the study of some one of the various branches of medicine, for it is only by so doing that the higher thought and professional skill can be attained, of which we may all be partakers in some measure. The general practitioner cannot cope with the ophthalmologist in the endeavor to trace the image upon the retina back through the delicate structures of the brain where the image is transformed into thought, or with the nerve specialists in dissecting the microscopic anatomy of the brain and of the nervous system in an endeavor to ascertain the manner of conveyance of sensation or the physiology of sleep; nor can he acquire the manual dexterity of the skilled surgeon, but he can gather in the important facts of the scientific knowledge acquired and expressed by others. Thus he has a wide field for cultivation, which is full of fruitage.

In his practical experience he finds that the human body is a continuity of structure, and disease in one part must inevitably have its influence upon the remainder. He should therefore be considered a broad specialist of the great sympathetic system, and a student of each individual part of the whole organism. He must have a clear conception of the whole phenomena of disease, including the psycological manifestations and reflex irritations. The great bulk of his practice is made up of the common diseases, and these should afford as much food for reflection as the most elaborate medical problems. The common cold, for instance, is but little better understood than the etiology of pernicious anemia; and locomotor ataxia is almost as amenable to treatment as the simple headache of certain individuals. Indigestion and auto-infection are far more common, and in the aggregate produce a greater amount of human distress, than cerebrospinal meningitis, yet scores of pathologists and bacteriologists busy themselves about the comparatively rare diseases with high-sounding names to one who undertakes to unravel the equally obscure problems of the more common complaints. This is a practical error, for surely those diseases which affect the largest number of people ought to be grappled with first. The physician who deals with these cases successfully is sure to reap a substantial reward.

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*Read before the Hennepin County Medical Society, October 6, 1902.

The most important work of the family physician, however, is in his bedside studies, aided, as he is, with all of the increasing and finer methods of diagnosis which the present day affords. Sitting by the bedside and studying the needs of the patient before him, his touch becomes more educated, his unaided eye more observing, his sympathies and intuitive knowledge more acute, and his interpretation of the various symptoms of disease more reliable. His experience should teach him to be a conservative in both medicine and surgery, for he has learned to depend largely upon the forces of nature, aided, it may be, by his curative measures.

The specialist is liable to be an enthusiast in his specialty. He is apt to be radical in his opinion as to operative procedures; and no matter how interested he may be in every other department of medicine, as we see it manifested in the general work of this Society, he does not ordinarily have the advantage of the bedside studies in seeing his cases surrounded by their usual environment, and he does not become familiar with the resources of nature in restoring abnormal conditions. He has been so accustomed to looking at matters from a surgeon's standpoint, and seeing the dangers that may arise from delay, that it is hard for him to view the situation from a general practitioner's standpoint. The physician is therefore constrained to remain silent, which is not as it should be in a multitude of instances. The public has already experienced some of the disadvantages of the great enthusiasm in surgery, and is casting about for a wise conservatism. The general practitioner has an opportunity of regaining some of his lost ground in wisely meeting this popular demand. As soon as the more intelligent people of a community learn that he has opinions that are of substantial value, they will turn to him for advice, and will rely upon him to shield them from unnecessary operations, and to deliver them into safe hands when necessary. The cases are numerous in which this advantage can be gained. Only a few days ago I prescribed for a patient with coccygodynia. She had previously been advised to have the coccyx removed, but I feel confident she can be cured without resorting to the knife, by following the treatment with some persistency.

Who can doubt that if all recent and considerable lacerations of the perineum after parturition were repaired promptly, and subsequently if it were found that involution was not taking place properly, and there was a tendency to displacement, then making use of all the necessary measures to aid the process and restore the organ, such as taking the knee-chest position, using medicated suppositories and a well adjusted pessary, temporally, many cases could be saved from the hands of the gynecologists, and many others saved from a condition of semi-invalidism? The manner in which many of these patients are dismissed by the physician after making two or three hasty visits, without knowing the condition of the uterus, is reprehensible. Most of them can be delivered successfully, even by the unskilled, but the after-treatment is quite as important as the delivery in a large percentage of cases.

Again, in my opinion, with a proper regulation of the diet, the prevention of fermentation and auto-infection, taking care that the cecum does not become distended with gas or fecal matter, much the larger number of selected cases—I use the word selected advisedly—of recurring appendicitis can be cured without operation. I am well aware of the unpopularity of this statement, and that authority is mostly against it. I am also aware of the great responsibility which the physician assumes in advising non-operative treatment in any case, but I have assumed the responsibility in a goodly number of instances, with happy results and no regrets. The function of the appendix, according to some authorities, should lend some credence to the treatment, for thus the appendix is not brought into activity. The theory which I have adopted is that when the cecum becomes distended, the entrance to the appendix becomes dilated and the strong muscular fiber of the appendix, through the irritation produced, acts as a reinforcement to send the contents of the cecum upward and onward.

I cannot but think that sometimes the present method, or rather the absence of method, of employing a physician will be modified, and that he will be employed at an annual salary to give regular and systematic inspection, examination, and instruction to the members of the household. To this end text-books will be written to guide the physician in so doing, and blanks will be furnished in which will be given full details of the health conditions of the individual. It seems to me that this method would be quite as feasible and advantageous for the purpose in view as for business houses to employ attorneys by the year, not so much to defend their cases in the courts as to prevent unwise measures which would require costly methods to rectify. The services of the physician should be in demand quite as much to prevent diseases as to cure them. In all the walks of life people know better what they should do to keep themselves in the best health conditions than they put into practice. It requires line upon line, and precept upon precept, to keep them in accord with their better conception of these requirements.

If the physician were employed as above indicated, he would see more diseases, fatal in their tendencies, in the earlier stages when curative measures would be more effective, and there would be fewer sudden, unforseen fatalities.

The general practitioner deals mostly with the more common diseases found in every-day life. With all his skill and habits of observation he does not always have in mind the characteristic symptoms of the more uncommon diseases. The specialists draw their patronage from a wide field, and their cases come to them because they are rare and out of the ordinary. It is but natural, therefore, that they should be more alert in diagnosis pertaining to their specialties. The physician should be thankful to those who are able to call attention to the symptoms and facts which have escaped his observation. Upon the other hand, it often happens that the specialist should be thankful to the physician for carrying the case along from the initiative until the facts become apparent. It is perfectly right, however, for the physician to insist that the specialist should be confined, in the main, to his specialty. In other respects he cannot afford to be merely a "master of ceremonies," the diagnosis and treatment to be furnished by the specialist, and the details carried out by a trained nurse. Sometimes, but happily not often, much care and judgment is required to avoid an apparent conflict of opinion and of authority.

It is sometimes assumed in medical writings, and in popular discourse, that the general practitioner is not a scientific man. Hence, there has grown up an unwarranted distinction between what is termed "scientific medicine" and "practical medicine." According to this view, he only is scientific who makes his observations in the laboratory, or with the accessories which the laboratory affords. The pains-taking physician who studies his case at the bedside is only a practical physician, making use of his art. Of the science underlying his art he is assumed to be ignorant. To be sure, there is much of art in the practice of medicine which is irrespective of science. He who inspires confidence, hope, and good cheer is practicing his art. There is a wider application in this practice, however, which is based upon scientific principles, for science is the sum of that which is known of the truth or principle; art is the application of the same to practice.

It is conceded that a great part of the accuracy of knowledge has come by the way of the laboratory, but all laboratory work is not scientific, however accurate it may be. To look through a microscope, and with narrow vision describe a lesion, is not in itself considered any more scientific than to listen through a stethoscope and observe an abnormal sound. With my laboratory accessories I may be able to demonstrate certain peculiarities of the blood or urine, or, at the bedside, I may be able to discern an abnormal action of the heart; but in either case I may be ignorant of what the facts imply, or what relation they sustain to other facts. In the laboratory or at the bedside, the degree of scientific knowledge which I may have depends upon what I know concerning the problems, the proper interpretation of the facts, and the relation which they may sustain to other facts. Our text-books teach us the science of physiology, chemistry, pathology, bacteriology, and pharmacology, and the general practitioner, as well as the specialist, must make his deductions from what he knows concerning these sciences in making their application to the art of treatment. The reckless disregard of some of these principles is often the cause of much misapprehension concerning the worth of the work by the workers in the different fields.

The family physician is chief custodian of the honor and integrity of the medical profession, not because of his commercial supremacy, not in the halls of legislation, nor upon the rostrum, but because he enters the homes and there exercises his personal influence upon the members of the household. The confidence and esteem of the public for medicine in the past, as at the present time, is lodged in him. Of whom can it be as well said as of the family physician that he watches the development of human life from the cradle to the grave? Even before the birth of immortal beings, he strives through the mother to improve their future well-being and to give them the best fighting chances in the world of action. During their last days upon earth he stands by the bedside ready, if need be, to ameliorate their physical and mental condition, and to smooth their ruffled brow by his gentle touch and soothing voice. He is a potent factor in many of their social and economic affairs through life. It falls upon him to read their physical index, and note their mental guage for the duties which devolve upon them. When entering upon new business relations, or in making any radical changes in their affairs, he often acts as their counsellor, for success in business often depends upon physical conditions. I wish he were more frequently consulted before matrimonial obligations were assumed. I would favor some legislative action whereby a physician, appointed for the purpose, should furnish the marriage license, instead of the county clerk. When the license is given the physician could provide the state with a detailed statement as to the physical, mental, and moral conditions of the applicants. This would open the way for the adoption of more stringent measures to protect the state from the propagation of the criminal and defective classes—measures considered by every one to be desirable. To my mind the subject is worthy of extended remarks and agitation.

The physician's influence is widely felt in the affairs of great corporations, municipalities, and the country at large. The immense life insurance companies depend for their very existence upon their medical examiners. No architect can build a dwelling in our cities without complying with the laws of sanitary science. Were it not for the influence of the physician, our streets would be even less cleanly, and the water and milk supply less wholesome than they now are, but education along these lines is of slow growth on the part of the people.

The army and navy in every civilized country depends for their efficiency and perpetuity upon their medical examinations. No emigrant dares set foot on our shores without being passed upon by a physician. None of our great steamships can enter or leave port without being inspected by medical men. Preventive measures for the limitation of disease are among the most important subjects occupying the physician of the present day. Fifty years ago little thought was given to this subject, but now some of the foremost physicians, both of Europe and America, are giving their attention to the investigation of the cause of diseases and how to prevent them. Formerly, these investigations had reference to public measures, and how to prevent the spread of great epidemics, but now more time is given to individual effort in every department of medicine; to the better understanding of the problem of infant-feeding, and how to clothe the little ones; how to adapt the studies of school children to their mental capacities, and secure for them the best hygienic conditions. Much attention is given to the proper food supply of adults, how to prevent the great waste of life from tuberculosis, the drink habit, and other measures of vast importance.

Permit me to say, in this connection, that we ought as far as possible to disassociate ourselves in the public mind from many physicians who are classed with us, but are not of us. I refer to the murderers of the innocent before they have seen the light of day, and others whose chief purpose is to deceive the unfortunate for selfish gain. It ought to be understood that no abortionist, except when an abortion is performed for adequate cause, and then only after consultation with a fellow practitioner, can have any standing among medical men of the better class. As in all other professions, it is unfortunate that the many must suffer from the low standard of morals of the few.

The question of compensation for services rendered is of vast importance to the physician, but time forbids my enlarging upon this point. The literature upon this subject is rather meagre, although the physician is frequently advised to exercise more business-like methods in collecting his bills.

I have yet to see a satisfactory explanation as to the reasons for the great discrepancy in compensation which prevails between the physician and the specialist. That it is greater than it should be is generally acknowledged, although it is conceded that the charges of the specialist should be more than those of the physician, not simply because people are willing to pay more for what they consider special knowledge, but because there is substantial equity in the matter. For the physician to acknowledge that others can do some kind of professional work better than himself, is but a compliment to his integrity and wisdom. Inventive talent has given the specialist a great variety of instruments. Delicacy and skill in the use of them require a long apprenticeship, since they are more potent for harm than good in untrained hands; moreover, manual dexterity is impossible to some, and is attainable to none except by continual practice. Furthermore, specialists have the symptoms of diseases pertaining to their specialty more fully in mind, and they are better equipped to meet all emergencies. Because of their limited work and special training, they are entitled to greater compensation for corresponding work than those who are engaged in general practice, but the excessive charges exacted by some surgeons from the medium classes are highly unwarranted. The family physician attends to a great variety of diseases, compassing a wide field of thought, and his compensation in the aggregate may be quite as great as that of the specialist of equal standing in the community. His work is more exacting and laborious, but it is quite as necessary for the wellfare of humanity, and it has its corresponding attractive features. Custom, however, has fixed, in a great measure, his compensation, and it is doubtful if the average citizen is able to pay more for his services than he is now doing. Nevertheless, in my opinion, the burden should be borne more heavily by the rich and well-to-do, in order that it may be less burdensome upon the less favored classes, not to speak of charitable cases. In all other affairs they are supposed to limit their expenses in accordance with their ability to pay for them, but when they become prostrated by sickness or injury they are entitled to as good treatment as can be given without regard to their financial standing, for human life and health has more than a commercial value. When, however, there is a willful determination not to pay honest bills they should suffer the consequences, as in other matters, but people in their extremity sometimes enter into contracts with the specialist which are so oppressive that their payment precludes the possibility of the physician collecting his modest fee. This, however, in no wise justifies the course which is sometimes pursued in striving to even up the matter by exacting a percentage of the receipts of the specialist for having furnished him the case. Every financial transaction should be open and above board; otherwise the tendency is to undermine morals.

In the various departments of medicine there is an opportunity for the development of the highest qualities of mind and heart, for the more we know the better we can appreciate how much there is yet to be mastered. It may be a question as to whether it is most advantageous to strive, as far as in us lies, to gain the mastery over one or many subjects, but if the general practitioner shall have a depreciating value of his own attainments as compared with those of the specialist, he will have a waning influence in the coming years, for the specialists are both aggressive and progressive, which is commendable. Furthermore, if the general practitioner would regain lost ground, he must be a thorough diagnostician, born of knowledge, tact, and experience; and he must be able to give wise counsel and therapeutic measures with soulful helpfulness to all those who are afflicted with the manifold diseases and mental disturbances to which human flesh is heir.

After all, it will be found more and more evident in the coming years that every one should have the seed of the Christ-spirit implanted within his heart, so that it may grow from within outward. It cannot germinate outside of the heart and grow inwardly, no matter what may be the mental culture of external surroundings. The law of life in the natural world is that germination must take place within the parent cell. Thus we have the blade, then the ear, then the full corn in the ear. It is perfectly safe to assume that in some sense the same law prevails in the spiritual world.

IRRITABILITY OF THE BLADDER*

By J. H. Rishmiller, M. D.

Lecturer on Clinical Microscopy, Hamline University

MINNEAPOLIS

The presentation of a unique clinical history of a case with an unusual symptomatology referable to the urinary bladder, is my apology for taking your precious time and valuable attention. The vesical irritation produced by a laceration of even the severest degree of the posterior vaginal wall never has equalled, in my experience, the profound disturbance evinced by the case to be related. Furthermore, with the restoration of the posterior vaginal wall, such signal and satisfactory results were obtained as to completely restore an emaciated and long bed-ridden patient to perfect health and happiness.

Asbury Hospital, Feb. 16, 1899.—Mrs. C——, aged 32, was referred to me by Dr. Mesker, of Olivia, Minn. She was a housewife by occupation, and had been married for twelve years. She first menstruated at the age of 14, and had always been regular; type, three weeks; flowed 4 to 5 days; quantity and character about normal; and had dysmenorrhea until the first child was born. She has five children, ages 4 to 12 years, and the labors had all been practically normal except the last, when a precipitate delivery lacerated the body of the perineum down to the rectum. She had one miscarriage three years ago, advanced to four months; has had for past year anorexia and indigestion; has been eating mostly liquid diet since last summer on account of want of teeth; vomits occasionally; tongue coated; and has been constipated for the past twelve years, sometimes going a week without defecation. Five years ago she weighed 150 pounds, but is now reduced to 122 pounds. She complains mainly and constantly of the unendurably frequent micturition. She first noticed this two years ago when she had spells of urinating every five or ten minutes. Seven months ago, for sometime she was unable to void her urine. This was followed by inflammation of the bladder. On jolting or riding the bladder trouble becomes unbearable. When this pain in the hypogastric region first started she noticed it before, but now after, passing water. For the past two years she has gotten out of bed from two to four times during the night to void her urine. For the past five months she has been constantly confined to her bed, lying on her back with the knees flexed and with the thighs crossed. In this position she was a pitiable object to behold, and a suffering bundle of nerves.

Examination showed that the posterior vaginal wall had been torn down to the rectum, revealing a large rectocele, together with a bunch of bleeding hemorrhoidal veins. There was apparently trifling sagging of the bladder. The uterus, however, was lower down than normal, somewhat anteverted, and rested on the bladder. The tubes and ovaries, on bimanual examination, were found normal, and no inflammatory condition could be detected in the pelvic cavity. Urinalysis, both chemical and microscopical, proved negative.

The symptoms all centered towards some apprehended bladder complication, and, in order to be certain of a correct diagnosis, it was deemed advisable to make a cystoscopic examination. This was undertaken the next day under chloroform anesthesia, but nothing was observed which could in any degree account for the fulminating symptoms, except an intense hyperemia of the mucosa of the neck of the bladder, and commencing uretha, as the parts folded over the receding end of the endoscope. The neck of the bladder is a fixed point, and is bound down in position under the pubes by the pelvic fascia, and a prolapse of the body of the bladder would consequently cause this hyperemia and irritation at the anchored neck of the urinary viscus, and produce all those life-burdening symptoms. The cervix of the uterus was then dilated and the uterine cavity curetted and tamponed with gauze.

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*Read before the Minnesota State Medical Society, June 18-20, 1902.

Feb. 22, 1899.—After this careful examination I concluded to perform a thorough Emmet operation for the relief of the voluminous rectocele, and for the support of all the more or less prolapsed pelvic organs. The Emmet operation was admirably suited to the conditions, and, in my estimation, was the only one which promised to restore this wide-gaping pelvic floor. Under chloroform I operated and carried lateral vaginal denudation close to the cervix, and then I deeply inserted four silver-wire sutures in each angle, and three for the outside. This brought the whole posterior vaginal wall in a sweeping arch from the cervix on snugly up to the bladder. The three external sutures were removed on the tenth day, and the internal sutures on the nineteenth day. I kept the patient in bed for three weeks and obtained perfect union.

The day after she got out of bed, she walked, without my permission, from the Asbury Hospital to my office, and expressed her gratitude that she was perfectly well, and that she had not even a vestige of bladder trouble and could void and retain her urine *ad libitum*. Considering that this patient had been an invalid for the past two years, a bed-ridden one for the past five months, emaciated from 150 pounds down to 122 pounds, and, on the whole, a complete physical wreck, it was certainly very gratifying to have obtained such excellent results from the operation, and ultimately to have transformed a human wreck to a happy being.

Olivia, Minn., June 6, 1901.

J. H. Rishmiller, M. D.

Dear Doctor:

You ask about Mrs. C——. She has been well ever since she returned. On the 21st day of March, 1901, I attended her in confinement, and she gave birth to an eight-pound boy. The labor was natural and easy. She was sick about four hours, and there was not the slightest injury to the perineum. She weighs 160 pounds, has no bladder trouble, her bowels are regular, and the hemorrhoids have entirely disappeared.

Yours truly,

Geo. H. Mesker, M. D.

In my plastic operations for the restoration of the posterior vaginal wall, I am almost invariably requested by the patient's physician to operate on the hemorrhoids at the same sitting. The hemorrhoids are present because the veins have lost their support by the laceration, and in restoring the posterior vaginal wall I always carry my sutures laterally deep into the tissues, in order to bring the muscles and fascia together. These deeply-placed sutures will include the redundant veins, and it is the very best modus operandi to obliterate and cure hemorrhoids of any degree, even in cases that have a feeling that the "bottom has dropped out." Therefore to operate in this class of cases, likewise for hemorrhoids, is, in my experience, entirely superfluous, and I have yet to see the case where the patient was not entirely relieved of her bunch of redundant veins.

I rarely find it necessary to operate upon cystocele itself, as was the custom some fifteen years ago. Why? Because, in eliminating and correcting the condition which ushered in the cystocele, we should be able to restore the bladder to its former position and normal function. Why not? Because you diminish, diametrically, the capacity of the bladder to the degree you carry your operation for anterior colporrhaphy or cystocele. The operative interference of the different displacements of the urinary bladder invariably resolves itself into the treatment of the associated conditions which have caused the displacement; in other words, operate on the cause, and not on the condition.

DISCUSSION

Dr. Edwin Phillips: I was very much pleased with the paper, but I differ with Dr. Rishmiller in one thing, i. e., in the manner of making a perineal body sustain the anterior vaginal wall. If you have a large prolapsed bladder you should operate on the cystocele before or at the same time you operate for a lacerated perineum. The doctor said he preferred Emmet's operation, known as the butterfly operation. This operation takes up the lax and torn tissue in the lateral walls of the vagina, which is well enough as far as it goes, but it fails to make a perineal body to sustain the anterior vaginal wall and the cystocele. This butterfly operation may hold the parts up for a short time, and benefit the cystocele and irritable bladder, but as soon as the parts are put on the stretch the old troubles return. The only operation that will benefit the patient for any length of time is Emmet's old operation, where you bring together the torn levator ani, transverse perinei, sphincter, vaginæ, and spincter ani muscles, and ischioperineal ligaments and lower portion of the triangular ligament, and keep the patient on her side, with knees tied together, until you have a normal perineal body that will sustain the anterior vaginal wall, and thereby prevent another cystocele. This is about the only criticism upon the manner in which the perineal operation was performed.

Dr. J. H. Rishmiller (Essayist): Dr. Phillips speaks of performing the operation for cystocele first. Of course, when you have an hour-glass dilatation of the bladder an operation for cystocele is indicated, but anterior colporrhaphy for irritation of the bladder, due to want of proper perineal support, will be only a dismal disappointment. Furthermore, you diminish the bladder at the expense of its capacity. Now, if you operate for cystocele alone and restore the posterior vaginal wall at a second sitting, the outcome, from my experience and from the observations of other operators, will show a majority of failures.

Dr. Phillips: Operate for cystocele and on the perineum at the same time.

Dr. Rishmiller: I am very much averse to operation on any degree of cystocele, because I have observed too many failures; and even Dr. Emmet, when I was his house surgeon, would not operate unless there was no other way of getting around it.

Dr. Andrews: Why should there be failures?

Dr. Rishmiller: For the main reason that the bladder dilates and contracts as it refills and empties, and the healing wound is never in an undisturbed and quiet state, which is so essential. In the second place you can hardly ever make the posterior vaginal wall come snug enough up against the anterior vaginal wall or bladder to prevent the sutures from giving way because of the to-and-fro movement of the operated surface, caused by the refilling and emptying of the bladder. I have seen again and again cicatrical tissue as broad as my finger all along the denuded surface of the anterior vaginal wall, and in consequence I am on the pessimistic side of lauding operations for cystocele. The patient ought to be catheterized every four hours. This is unquestionably essential, but then, again, you run the chance of infecting the bladder and producing a cystitis.

The doctor speaks about the old Emmet operation. I have never seen Dr. Emmet perform the old operation; he has discarded it. While I was interne at the Woman's Hospital he always performed the one that is generally discussed in books like Dudley's and Kelly's, and is the one universally regarded as the best operation.

COURSE OF GASTRIC CARCINOMA WITH AND WITHOUT OPERATION

Kroenlein (quoted in Medical Standard), reviews 209 cases of cancer of the stomach observed by him. Of this number 146 were operated upon, and 22 of these are now living, after a period of from one to eight years. In his experience unoperated cases all die within one year after the beginning of the disease. Death is usually postponed about three months by gastroenterostomy, and fourteen months by gastrectomy. These patients unfortunately do not come to the surgeon until the symptoms are severe, and the indications for operation usually unfavorable.—Denver Med. Times.

NORTHWESTERN LANCET

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DOCTOR KOCH'S DENIALS

With vigor and argument, Dr. Koch maintains his former position in regard to the non-transferability of animal tuberculosis to man. He admits that cases of tuberculosis do occur among butchers and other persons who handle animals, but claims the percentage of cases is equally high among carpenters. He claims that transmission from animals to man is exceedingly rare, and in all of the cases that have been brought to his attention the data were insufficient and the proof unreliable. The ingestion of poisoned meat is always followed by disastrous results, yet the community eats tuberculous meat and milk without infection. The boiling of milk does not exterminate the tubercular bacilli, yet the public feel secure in drinking sterilized milk, but will eat butter teeming with bacilli without a quiver.

Dr. Koch feels that if measures are taken to combat animal tuberculosis, they must be on economic and not on sanitary grounds. The disease must be studied from its root, better dwellings and workshops established, overcrowding avoided, and tuberculous persons isolated.

M. Nocard, the French veterinary authority, took issue with Dr. Koch. If the latter's statements were true there were but two conclusions to draw: that transmission of tuberculosis does not occur, and that precautions are unnecessary. The veterinarian maintained that animals become infected from man, but that some are more susceptible than others, and the degree of virulence depends upon the environment.

Milk from a tuberculous udder is highly infectious, but the number of bacilli must be large for infection through the digestive organs.

When two such men disagree it is well for the physician to urge his patients to keep on the safe side; to assist, by every means in their power, the stamping out of disease; to investigate their milk-supply by inspection and rejection of diseased cattle; and to aid the authorities in their efforts to secure certified milk and meat.

THE GENERAL PRACTITIONER

The paper on this subject, which appears in another column, is well worth reading, particularly by the general practitioner. Too much has been said and written of the specialist in medicine, and too little has been heard from the general man, who sees so much of disease from its incipiency to its termination. The average man hesitates to report his experience for fear some alleged expert will confuse or criticise his efforts. The details of many diseases are known only by the family physician. The specialist sees only the actual or present conditions, and he does not always take into consideration the minor events in the life of the individual which have conspired to bring about the disease state. In his desire to investigate an apparent gross pathological but atypical evidence of disease, he forgets or overlooks the small things that the general practitioner knows full well are at the foundation of the illness.

The symptoms, conditions, distortions, and impaired functions may have originated from worry, unhappiness, discord, and domestic sorrows and their consequences, yet the specialist sees only the gross appearances, and offers to relieve them with knife, electricity, or drugs. Too little attention is paid to mind, and too much to matter. The general man in medicine sees the beginning, strives to alter it, is unable to correct abuse, and, after a long siege and an honest effort, tires or is discouraged, and resorts to the specialist for aid and comfort. Occasionally it is forthcoming, but frequently the patient is returned more broken and bruised, and often beyond repair. Something, however, may be said on the other side: the physician from his general training is not familiar with unusual disease states, and the advice of the specialist may be valuable, if sought early. At present there is too much commercialism to favor the cordial sympathy between doctor and specialist. They should understand each other better, and seek closer communion in that they may do the greatest good. This relationship will be advanced by the general practitioner's publicity. He must show himself more, must record his experience, and write it out and read it to his brother specialist that both may profit by it. The unusual cases are those seen in general practice, yet how many of them see the light of the medical society?

The editor has a speaking acquaintance and intimate friendly relations with many of the medical men, who are competent and skillful observers and diagnosticians, yet they almost never write papers for medical societies. They sit by, and hear papers that are interesting and theoretical, while their own material evaporates, and is lost. Papers on general subjects from the internalist or general surgeon are always in demand, and should be cheerfully forthcoming. The proper method in preparing such material is to have your case, then record it, read it before a medical society, and publish it in a reputable journal, and thus take your place among the great men in medicine—the general practitioners.

TUBERCULOSIS CONGRESS

The scientific world is aroused on the subject of tuberculosis. In every state and country medical and scientific men are discussing the nature and treatment, as well as the prevention, of this disease.

About one hundred authorities met in Berlin last week to talk over the results of the year's inquiries and research. Two of the representatives were from the United States; a larger number came from other countries. The congress sent a telegram to President Roosevelt and to all of the sovereigns of Europe, expressing to each, "as an illustrious patron for the prevention of tuberculosis, our grateful homage."

Dr. Chalmette of Lille, France, gave an account of the house-to-house crusade against tuberculosis in France, especially the nursing-at-home system carried on by private beneficence. The state partakes in this only by subsidies from the mutual betting at the races. Societies are formed in the small towns supported by town councils, to prevent the spread of contagion.

These are suggestions that other towns and cities might profitably follow. If all the moneys that had been grafted by the late and defunct administration in Minneapolis had been diverted to sanitary benefits, tuberculosis and other contagious diseases would disappear within a remarkably short period of time.

There is a general and earnest effort, that is in itself contagious, to stamp out needless disease. Minor details are at work, but more heroic measures must be enforced. The State Board of Health, the State Sanitary Association, and the committee of the State Medical Society have done a great deal in the way of a beginning to bring the subject before the public.

If some means could be devised to secure a fund for this purpose, the state and municipal authorities would gladly lend substantial aid. State laws would be enacted, and a vigorous crusade established.

This can be done by persistent presentation of the subject by physicians and sanitarians in their endeavors to educate the people to a better understanding of their dangers. Hearty co-operation and healthy enthusiasm of municipal and medical bodies would accomplish wonders. Physicians should advise their legislators, and secure their assistance in this and other matters that are for the good of the people.

The report of the U. S. Commissioner of Emigration shows that the comparative increase of disease among the emigrants in the past year has been more than two to one over that of 1901. Unquestionably, tuberculosis claims a large per cent of this increase; and the commissioner is satisfied that "the mere return of the diseased alien at the cost of the offending line" is insufficient, and he advises that a penalty more proportionate to the grave risk to which the American people are exposed by such importations should be imposed. A rigid medical inspection at the ports of departure is absolutely necessary, and a bill will be presented in congress at its next session to accomplish this end.

If these protective measures are enforced the health authorities will be able to isolate and segregate tuberculous subjects, and to prevent others from coming into immediate contact with the infection.

BOOK NOTICES

Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M. D., B. Sc. Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Fourth edition, enlarged and thoroughly revised. In one octavo volume of 727 pages, with 236 engravings and 25 full-page colored plates. Cloth, $5.00, net. Leather, $6.00, net. Half Morocco, $7.00, net. Philadelphia and New York: Lea Brothers & Co.

The fifth edition of the popular treatise has been partly rewritten to keep the book abreast of the advances in diagnostic technique. The scope of the present work has been broadened to include not only symptoms, but also the physical signs and clinical tests which experience has proven to be reliable. The chapters are so arranged that any symptom may be readily found under its proper classification.

The ilustrations are clear, and show at a glance the explanation of the text. There are many colored diagrams and many half-tones of actual cases.

The book is admirably adapted to the needs of the student and busy practitioner.

A Text-Book of Anatomy. By American Authors. Edited by Frederic Henry Gerrish, M. D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. Second Edition, thoroughly revised and enlarged. In one imperial octavo volume of 943 pages, with 1.003 engravings in black and colors. Cloth, $6.50 net. Leather, $7.50 net. Flexible water-proof binding, for use on the dissecting table, $7.00 net. Philadelphia and New York: Lea Brothers & Co.

The second edition of this work has just been issued by the publishers to take the place of a very large first edition that has been exhausted.

The list of authorities associated with Dr. Gerrish is a guarantee for the thoroughness and excellence of the book.

Illustrations have been changed to conform to the text, new pictures have been added liberally, many are in colors, and all serve to emphasize the anatomical relations of the various structures.

The section on regional anatomy is illustrated by a series of horizontal sections at different levels, the various parts being labelled directly with their names whenever possible. The chapter on osteology has been enriched with a series of drawings displaying the areas of attachment of muscles to bones.

The publishers have kept pace with the authors, and the result of their joint labors is a text-book of anatomy invaluable to surgeons, students, and practitioners. The book is magnificently printed and illustrated.

A Text-Book of Histology and Microscopic Anatomy of the Human Body, Including Microscopic Technique. By Dr. Ladislaus Szymonwicz, Professor of Histology and Embryology in the University of Lemberg, Translated and Edited by John Bruce MacCallum, M. D., of the Johns Hopkins University, Baltimore. Illustrated with 277 Engravings, including 57 Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co.

The editor of the above attractive and valuable book says in the preface: "In the translation of this work and the preparation of an American edition an effort has been made to place at the command of the English-speaking instructors and students a text-book which includes the best results of recent investigation"; "The spirit and characteristic features of the German original have been carefully retained, changes in the text or illustrations being made only where some definite advantage was to be obtained"; "It has been the object throughout to trace, as far as possible, the development and the histogenesis of the tissues, and it is hoped that the attention of instructors and students may be drawn to the importance of viewing histology from this standpoint."

Much could be said of the book itself, which is well printed upon good paper, the type large and clear, and the subject well arranged, and it contains 435 pages.

The first part, as is usual in histologies, contains the microscopic anatomy of the cell and special tissues.

The second part includes microscopic anatomy of organs, and two concluding chapters, one on general and one on special microscopic technique. These last two chapters, whose subjects are usually treated in a very brief manner in histologies, are as full and definite in the present work as students could wish in such a work, and deal with the subject in an extensive manner, in exceptionally clear and concise form, and will be found of considerable value as a reference work on staining and mounting, the full formulæ and methods being given.

While we feel that gross anatomy has been pretty well covered by the literature already published we hail with delight the knowledge given us yearly by the histologist, whose investigations have shown us that the protoplasm once, and not long ago, thought to be a homogeneous mass, has a distinct structure, and that the essential part of the cell, the nucleus, contains at least two, and often as many as six, proteids, which are chemically and microscopically different. These recent investigations and theories are set forth in this book, and we have found them extremely interesting reading.

While the text and illustrations have been changed somewhat from the original, as the editor states, we are especially impressed with the high order of artistic printing and reproduction which in this day is becoming an essential part of our literature. Worthy of special mention are the plates, showing the stages of karyokinesis, in engravings after reconstructed models by F. Mall, showing the relations of the blood and lymphatic vessels of several organs, which are certainly quite ingenious; and, lastly, we are glad to note that so many of the original colored plates by Dr. Baracz are retained. They are exceptionally beautiful, and if referred to while studying the microscopic specimens which they represent they cannot help but be of great service.

These plates are fully described by a transparent fly-leaf which bears outlines of the specimens well labeled.

Referring to the importance of studying histology from the standpoint of histogenesis, which the editor urges, as noted in the preface, we find that there is special reference given to the histogenesis of the blood, connective tissue, elastic tissue, epithelium, fat, heart muscle, neurones, and voluntary muscle. The theories which have developed during recent investigations, as well as facts which are proven, have been fully explained in a very simple and readable manner. We heartily endorse the remarks of the editor in regard to this method of studying anatomy, and are pleased to note the careful treatment of the subject.

The book reads easily, and not only contains what the student wants, but is especially a textbook, and will be found very useful when references are needed.

A. E. Wilcox.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. E. A. Bothne has located at Ulen, Minn.

Dr. M. E. Withrow has decided to locate permanently in Stillwater.

Dr. Edward Rich, of Wilmot, S. D., has decided to locate in Utah.

Dr. M. O. Dalager, of Eagle Grove, Iowa, has located in Alpha, Minn.

Dr. A. E. Johnson, of Zumbrota, Minn., has removed to Red Wing, Minn.

Dr. James McLaughlin, of Benson, Minn., died last month in Minneapolis.

Dr. H. H. Larson, of Twin Valley, Minn., died last month, at the age of 54.

Dr. Ejnar Lohrbauer, of Lakota, Minn., has decided to locate in Northwood, N. D.

Dr. M. A. Lee, of Benson, Minn., has gone to Edmore, N. D., and will practice there.

Dr. Edwin Wayte, of Herman, Minn., has gone to Butte, Mont., to take a position in a hospital.

Dr. W. H. Lincoln, of Wabasha, Minn., has become a partner of Dr. D. A. Stewart, of Winona.

Dr. R. T. Adams, a graduate of the State University, Class of '93, has located at Mantorville, Minn.

Dr. B. W. Kelly, of Aitken, Minn., was accidently shot last month, and sustained a serious wound.

Dr. E. Klaveness' plans for building a Scandinavian hospital at Brookings, S. D., are progressing rapidly.

Dr. Lou M. Gerber has returned to Jasper, Minn., from Faribault, and will resume practice in her old place.

Dr. G. E. Campbell, of Wykoff, Minn., has gone to Los Angeles to spend the winter for the sake of his health.

Dr. Gustav Schwyzer, who recently came to Minneapolis from St. Cloud, has offices at 413 Pillsbury Building.

Dr. George Edwards, of Lake Preston, S. D., was married last month to Miss Bertha E. Langlie, of Lanesboro, Minn.

Dr. W. H. English, of Anaconda, is now located in Butte, Montana. Dr. English has gone East to do post-graduate work.

Dr. C. W. Doran, of St. Paul, has removed to Montgomery, Minn., having purchased the practice of Dr. Moore, of that place.

Dr. W. J. Mayo, of Rochester, Minn., read a paper last week on the "Radical Cure of Cancer," before the N. Y. State Medical Society.

Dr. A. H. Tillisch, of Chicago, has located in Canby, Minn. Dr. Tillisch is a graduate of the Northwestern University Medical School.

Dr. John Benjamin, a Minnesota pioneer, died at Hutchinson last month at the age of 80. He was the father of Dr. A. E. Benjamin, of Minneapolis.

Dr. John A. Freeborn, of Fergus Falls, Minn., has been doing special work in Chicago, and was fortunate enough to attend a clinic of Dr. Lorentz.

Dr. Charles Coulter, a recent graduate of the State University, is in charge of the practice of Dr. McKinnon, of Wadena, Minn., during the latter's sickness.

A district medical society was formed last month at Granite Falls, Minn., by the following counties: Yellow Medicine, Chippewa, Lac qui Parle, and Renville.

Dr. E. W. Humphrey, a graduate of Hamline, and Dr. V. I. Miller, both of Dundee, Minn., have gone to Brookings, S. D., where they will conduct a sanitarium.

Rochester, Minn., has named its new park "Mayo Park" in honor of Dr. W. W. Mayo, an highly respected citizen who has long been appreciated in that city.

Dr. John C. Munro, of Boston, professor of surgery at Harvard and surgeon of the Boston City Hospital, has been visiting St. Mary's Hospital at Rochester, Minn.

Dr. E. Morehouse, of Owatonna, Minn., has gone to Yankton, S. D., to take the practice of Dr. G. G. Morehouse, who has gone to Chicago to take a position in a hospital.

Drs. J. T. Asbury and C. J. McGuire, recent graduates of the University of Illinois, have located in Wabasha, Minn., and have purchased the practice of Dr. W. H. Lincoln.

Dr. H. A. Cayley, of Butte, Montana, was shot last month by the editor of the "Inter Mountain," a leading daily paper of that city and the state. Dr. Cayley lingered several days before dying.

The Rice County Medical Society was organized last month, with the following officers: President, Dr. F. M. Rose, Faribault; first vice-president, Dr. Wm. A. Hunt, Northfield; second vice-president, Dr. R. N. Jackson, Faribault; secretary, F. R. Huxley, Faribault; treasurer, W. H. Robilliard, Faribault.

The program of the next meeting of the Hennepin County Medical Society is as follows: "Report of Cases of Diphtheria treated with Formaldehyde," Dr. C. A. Donaldson; "X-Ray Therapeutics," Dr. W. P. Spring; "Consultation," Dr. A. B. Cates. The last-named paper promises to bring out a lively discussion. The society meets Tuesday evening, Nov. 2d.

The following candidates were licensed by the Minnesota State Board of Medical Examiners, October 24: Amos Leuty, Hull, Iowa, P. & S., Iowa, 1898; Floyd W. Burns, St. Paul, Minn., P. & S., Chicago, 1902; Anton J. Moe, Heron Lake, Minn., Rush, 1897; F. J. Bickford, Milroy, Minn., U. of Minn., 1902; Coryell Faulkner, Minneapolis, Minn., Kansas Med. Col., 1899; Oscar Stenberg, North Branch, Minn., Trinity U., 1902; J. A. Butz, (Eclectic), Meservey, Iowa, Bennett, 1901; C. A. Lester, Zumbro Falls, Minn., Hosp. Med. Col., Louisville, 1897; E. B. Crowell, (Eclectic), Minneapolis, Minn., Ecl. Med. Institute, Cincinnati, '95; A. B. Williams, (Homeopathic), Iona, Minn., Hahnemann, Phil., 1902; G. G. Morehouse, (Eclectic), Owatonna, Minn., Bennett, 1902; J. H. Crowe, West Superior, Wis., Rush, 1902; E. LeRoy Kannary, (Eclectic), Northfield, Minn., McGill, 1900; M. L. Ransom, Foley, Minn., Jefferson, Pa., 1902; J. A. Schultz, Sleepy Eye, Minn., Rush, 1902; E. A. Bothne, St. Paul, Minn., P. & S., Chicago, 1902; D. E. Rogers, Breckenridge, Minn., Harvard, 1901; F. D. Patterson, Florence, Wis., U. of Mich., 1893; E. W. Humphrey, Brookings, S. D., Hamline, 1902; W. G. Dolan, Cloquet, Minn., Rush., 1902; A. F. Tanner, Minneapolis, Minn., Hamline, 1902; A. E. Johnson, Zumbrota, Minn., Rush, 1902; James Tyvand, Mt. Horeb, Wis., P. & S., Chicago, 1902; W. T. Bailey, Jr., Duluth, Minn., Med. Chirurgical, Phil., 1902; W. H. Replogle, (Homeopathic), Delavan, Chicago Homo. Col., 1902; Harry C. Tuke, Minneapolis, Minn., Hamline, 1896; K. A. Danielson, (Homeopathic), Mankato, Minn., Rush, 1900; F. Gramenz, Bryant, S. D., U. of Minn., 1900; Rachel E. Moulton, Minneapolis, Minn., Hamline, 1902; Adelaide Woodward, Minneapolis, Minn., Hamline, 1902; O. M. Haugan, Fergus Falls, Minn., Northwestern, Chicago, 1902; R. T. Adams, Mantorville, Minn., U. of Minn., 1893; W. R. Humphrey, Ely, Minn., U. of Maryland, 1902; Henrik Tillisch, Canby, Minn., Northwestern, Chicago, 1901; G. H. Norris, Clearwater, Minn., U. of Mich., 1898; Margaret Ryan, Minneapolis, Minn., Hamline, 1902; C. J. McGuire, Minneiska, Minn., P. & S., Chicago, 1902; Euphemia Howell, Eagle Bend, Minn., U. of Mich., 1877; T. W. Thayer, (Homeopathic), Fergus Falls, Minn., New York Homo., 1900; A. G. Maercklein, Ostrander, Minn., P. & S., Wisconsin, 1902; L. G. Smith, Foxhome, Minn., Saginaw Valley Med. Col., 1901; J. T. Asbury, Wabasha, Minn., P. & S., Chicago, 1902; G. M. Haywood, (Homeopathic), Minneapolis, Minn., P & S., St. Louis Homo., 1881; F. E. Vrooman, Anoka, Minn., Kentucky Sch. of Med., 1902; Jane C. Hughes, Mankato, Minn., U. of Mich., 1902.

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THE X-RAY IN THERAPEUTICS*

By W. P. Spring, M. D.,

MINNEAPOLIS

Is it only for a short time that the utility of the Roentgen ray in therapeutics has been exploited, but so rapidly has it assumed prominence that one now finds in nearly every medical journal some reference to the matter. I wish, very briefly, to give my experience in a few cases that have come under my care, and then to proceed to the general consideration of the subject.

Three cases of lupus have shown very marked improvement.

A. D——, aged 18, referred by Dr. Vander Horck, has had lupus on the face, neck, and right hand since eight years of age. The whole surface of the face below the eyes was covered, as was a place on the neck the size of a dollar, and on the ulnar side of palmar and dorsal surfaces of the right hand. He commenced treatment June 24th, and has continued it up to the present time. On August 2d there was a sharp attack of dermatitis, and the rays were omitted till August 20th. In the meantime he was treated by the positive static brush, from soft-maple electrode. He was at first treated every day, and now comes every other day. The face is very rapidly assuming a natural color, and the hand has only some thickened skin on a part of the palmar surface. The nasal cartilages have been partly destroyed and of course cannot be restored.

H. S——, aged 26, referred by Dr. Vander Horck, had a patch covering the whole dorsal surface of the right hand, another large patch under the left axilla, one in the lumbar region, on the left side, and another on the right side on the shoulder blade. Treatment commenced July 5th. July 29th he had dermatitis, and was treated with brush till August 20th. It was remarkable how rapidly each case progressed after the burn, which was only of the first degree.

He was discharged September 6th, not entirely well, but so nearly so that he went to work at threshing.

Miss H——, referred by Dr. Vander Horck, commenced treatment July 7th. She had a patch on the left side of the face. Treatment was continued till September 26th, when she stopped coming. The face was cured, except a few nodules at the upper surface, and they will doubtless disappear owing to the continuance of the *x*-ray effect for some time after the treatment stops. In this case there was also dermatitis for about two weeks in August, with decided improvement afterwards.

H. S——, aged 60, referred by Dr. Vander Horck. Nov. 19th, small scab had formed over the larynx, and the patient picked it off. It became an open sore, growing rapidly until he commenced treatment June 2d. There was an ulcer two inches in diameter, and also a small epithelioma on the lip. I gave him four treatments, which produced a very marked reaction in the ulcer. I then stopped, and gave him three more. He discontinued coming, and I have had no report from him since.

Mrs. A——, aged 47, referred by Dr. Dunsmoor, who had removed her right breast for cancer on December 10, 1901. She began treatment April 25, 1902. At that time there were several nodules scattered along the scar, and an indurated mass in the right axilla. She continued treatment irregularly till June 26, 1902. She had thirty-one treatments. Slight redness existed for about a week in May. The local effect was all that could be desired, but as she was away from friends and receiving no care and improper nourishment, and quite a little toxemia developed at times, I advised her to discontinue the treatment. I have heard nothing from her since, as she went home to Iowa.

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*Read before the Hennepin County Medical Society, November 3, 1902.

Mrs. B——, aged 60, referred by Dr. Abbott. She first noticed a tumor in the left breast two years ago. The breast was removed by Dr. Abbott. In July there was a second recurrence in the scar and the case operated upon again. On October 7th she began treatment. There were recurrence in scar and a movable gland in the axilla. She has taken only nine treatments, but with the second, she experienced relief of pain, and ability to use the arm which has been troubling her. She has just buried her husband, who died of cancer of the stomach, which is probably only a coincidence.

Miss E. W——, referred by Dr. W. A. Jones. Her father died of cancer of lip and neck. The left breast was larger than the right for two years; soreness and pain in breast; no glands in axilla; nodules can be felt in breast. She commenced treatment July 22d. Nine treatments were given, then the treatment stopped until August, when fifteen more treatments were given, when the pain was relieved and the breast was softer. She then developed a burn of the second degree, which has proved very obstinate, and necessitated stopping treatment. The burn has been painful, burning and stinging. It has had a yellow base, and has healed very slowly. It is now the size of a half dollar. Most applications have irritated it. Those that were moist were alone well borne, i. e., gauze with rubber protection. A one per cent cocain solution relieved pain. Aristol, grains 15 in 1 dram of lanikol, answered well for a time, but is not so soothing now.

Mr. T——, referred by Drs. Abbott and W. A. Hall, had a rodent ulcer, the size of a pea, on the left side of the nose. It had been treated by caustics without success. Treatment commenced August 1, and the patient was discharged cured October 11th, after twenty-five treatments.

P. G——, aged 64, referred by Dr. Vander Horck. Has had epithelioma on the left side of the nose and inner canthus of the left eye for ten years, and on the lower lip and chin for six months. The latter had not been previously treated. The former had been treated without success. He commenced treatment August 19th, and is still taking treatment. The lip and chin are well and without any dermatitis or tanning the hair of the chin is epilated, and the skin, where the radiation acted, is as soft as a baby's. This occurred in nineteen treatments. The nose and eye are more obstinate, but are improving.

F. B——, aged 47, referred by Dr. Wright. Small sarcoma on left side of the nose for five years; removed four years ago; recurrence in one year; very slow growth; removed by Dr. Wright June 26th, 1902. The patient was advised to have the x-ray used at once, to prevent recurrence. He then had to return to Montana. He came back October 11th for treatment, and I have him still under treatment, and there has been no recurrence as yet.

Mrs. B. A——, referred by Dr. Abbott, who had removed the womb and ovaries for cancer. There was recurrence in five months. Commenced treatment July 1st. The whole anterior wall of the vagina was invaded with cancerous growth.

I give alternate treatments through the skin of the abdomen, and by the vagina. I place her in Sim's position, and use the speculum to hold the vagina open. Since the middle of September I have been raying the back and abdomen with a high vacuum tube, and also giving vaginal treatment with the new Caldwell tube, which was at first inserted into the vagina through a celluloid speculum, and now without any speculum. The growth has certainly been retarded and the general effects have been very marked, there being less pain, less discharge, better appetite and sleep, and more red corpuscles. The case is still under treatment, and will be reported upon at a later date.

E. L——, aged 46, sarcoma, referred by Dr. Hoegh. Following an attack of typhoid fever last fall he noticed a swelling over the right lower rib near the sternum. It grew quite rapidly until seen on May 25, 1902. At that time it was about eight inches in diameter. The fluoroscope showed a shadow quite dense in the center, and shading away to the edges of the swelling. I gave thirteen treatments from May 25th to June 14th. He then stopped coming. In August I examined the patient again, and found the tumor not half so large. There was an ulcer as large as a quarter near the center of the swelling.

In all these cases the tubes have been excited by a thirty-inch sixteen-plate static machine. A variety of tubes have been used, the choice of tubes for each case being determined by the vacuum as tested by the spark-gap backed up.

My lupus cases, and superficial malignant growths have been treated by soft or medium tubes; the breast and uterine cases with hard tubes, except that the Caldwell, which is inserted into cavities in contact with diseased tissues, is very low.

The tubes have been placed about six inches from the surface of the body, and treatments from eight to twenty minutes, have been given according to the reaction produced. I have discarded masks, except in cases about the face and head where I wish to protect the hair. In these I use lead-foil or sheet lead.

I treat the case of vaginal cancer every other day; for about twenty minutes. I use a very high tube, and move it about all over the abdomen and lumbar region of the back, and then use the Caldwell tube in the vagina about five minutes. It seems to me very important in all treatments, except where very small tumors are being rayed, to move the tube frequently, and thus avoid producing an intense reaction on any one portion of the skin. If I had done this in my case of burn of the breast, and had directed my rays upon the sides and under-surface, instead of the upper surface alone, I think the burn might have been avoided, although in that case of burn there was almost no preliminary redness.

In the treatment of the nose and sarcomatous scar I have passed the danger-point, I think, and have a certain amount of tanning, which allows more persistent treatment without danger of burn, as first demonstrated by Dr. Morton, who says that one must produce that condition if he expects to accomplish anything in internal growths.

There are reported so many cures of lupus, rodent ulcers, epitheliomas, and superficial malignant growths, that it seems established that favorable results in these cases can be promised. It is also true that the hair can be removed permanently where it is necessary, by giving each month, for several months, a few treatments after epilation has been accomplished.

If the *x*-rays are limited to treatments of these conditions, their use will be a great boon to the many sufferers from these hitherto obstinate and almost incurable conditions; but they are being tried now in many internal malignant growths, with varying success. It seems to me that this new field will have a larger percentage of favorable results as we know more about the use of the *x*-ray, and as confidence in its efficacy causes patients to make use of it before they are so thoroughly infected that their cases are hopeless, and they are advised to try the *x*-ray because everything else has been used without success. At that time the *x*-ray treatment can only be expected to furnish an easy road to the undertaker. Even this service has won it many friends among pain-racked patients and their relatives.

A review of the reports of sarcoma that I have been able to collect from recent journals seems to me to show that we have much to expect for this treatment in properly selected cases. Seven cases are reported cured. Ten cases are reported with decided improvement, and most of them were still under treatment at the time of report. Five cases are reported with local improvement, but treatment was commenced so late that death resulted from exhaustion or metastasis. Only three cases are reported with no result, and one too early for report.

In the field of cancer I have reports of nine cases originating in the uterus, some recurrent. Three died during treatment, one of uremia and two of exhaustion. In all three the pain and discharge were improved. One tumor is reported smaller, and the pain relieved. Two cases of disease were stationary during treatment. One had less hemorrhage and pain. In one, improvement was spasmodic, and not permanent; and one, reported to me personally by Dr. Cleaves, was very nearly cured after four months' treatment. She also used phototherapy with the marine search-light.

Four cases of pylorus are reported. In three of them pain stopped so that opiates were dis-

SARCOMA

Age	Years Duration	Location	Previous Treatment	Time of X Ray Treatment	Reported by	Results
		Left Cervical large as orange.		Feb. 21, '02 Apr. 19, '02	Skinner [1]	Tumor nearly gone.
		Superior Maxilla	Operation	May 2, '02 Sept. 2, '02 Under treatment.	Skinner [1]	Improving, has had toxemia with abscesses.
		Abdominal scar	Operation on Uterus.	Jan. 8, '02 Sept. 2, '02 85 treatments.	Skinner [1]	Slight shrinking in tumor. Feels well. Is going to teach.
		Lower Lumbar.		Four months 30 treatments.	Skinner [1]	Free from pain. Tumors cannot be felt.
	3	Large of neck.		17 treatments.	Skinner [1]	Cured. Tumor 7"x10" ulcerated.
		Abdomen.			Morton [2]	Relief. Tumor one-half size.
		Angle Jaw.		1 month.	Pusey [7]	Cured, Slight recurrence.
		Orbit.		1 month.	Lord [9]	Cured.
45	2	Neck.	Operation	Feb. 10, '02 June 18, '02	Cooley [10]	Cured.
60	4	Neck.	2 operations	6 weeks.	Cooley [10]	Cured. Also tumor in axillary region that had not been treated.
38	1	Upper Jaw Orbit.	4 operations	5 months under treatment.	Snow [10]	Three-quarters gone, and improving.
22	4	Mastoid Temporal.	Operation. Caustics.	Jan. 25, ,02	Morton [3]	Pain relieved. Growth gone.
57	17	Parotid.	2 operations	6 weeks.	Cooley [10]	Tumor decreasing.
8	¾	Back.	2 operations	10 treatments.	Cooley [10]	Tumor stationary, too early for report.
		Abdomen.	Operation.		Geyser	Ascites stopped, less odor, comfortable.
		Abdomen.			Morton [2]	Pain relieved. Tumor one-half size.
		Pectoral muscles		1 month.	Pusey [7]	Pain relieved. Tumor same.
19	1¼	Femur.		Jan. 5, '02 June 3, '02	Cooley [10]	Tumor 1 inch smaller. Metastasis taking place.
		Thyroid			Greenleaf [14]	Large ulcers reduced two inches. Hemorrhage and pain stopped; third treatment. Died.
48	2	Superior Maxilla.		Feb. 20, '02 May 26, '02	Skinner [1]	Arrest growth. Pain and discharge stopped. Died. Toxemia.
		Angle Jaw Neck.	Operation on Parotid	Feb. 10, '02 June 2, '02	Skinner [1]	Partial relief, Pain and arrest of growth first two months. Died. Exhaustion.
	1	Fibro Cystic Uterus.	Laparotomy attempted.	5 weeks.	Skinner [1]	Died. Exhausted.
		Neck.			Lord [9]	Local improvement. Died in one month. Metastasis.
37		Thigh.	2 operations	1 month.	Cooley [10]	No result.
37	5	Iliac Glands.	5 operations	2 months.	Cooley [10]	Slight diminution of tumors. Now losing weight. Poor chance.
	3	Upper Jaw.	3 operations Caustic Paste.	3 weeks.	Cooley [10]	No effect on pain or tumor,

CANCER OF BREAST

Age	Duration Disease	Location	Previous Treatment	Length X-Ray Treatment	Reporter	Results
		Recurrence Deep lymphatics.	Operation	Mch. 20, '02 Sept. 2, '02 60 treatm'ts.	Skinner [1]	Pain gone. Glands gone, Ten pounds gain.
		Glands under pectoralis and clavicle.	Breast and glands out 2 years ago.	Aug. 2, '02 Sept. 2, '02 10 treatm'ts.	Skinner [1]	All gone but two, size of pea.
		Breast	Operation		Morton [2]	Four cases cured.
48	3	Breast	Operation	July, 1901 Apr. 12, '02	Pusey [7]	Cured. Dermatitis Aug. 15 to Sept. 2.
58	6	Breast ulc'rat'd	Operation	Nov. 1, '01 Apr. 2, '02	Pusey [7]	Cured. Pain gone in two weeks Gained ten pounds.
49	3	Breast ulc'rat'd	2 operations	20 treatments.	Pusey [7]	Cured. Dermatitis two weeks.
68	½	Breast	No operat'n	Jan. 23, '02 Mch. 18, '02 29 treatm'ts.	Hopkins [8]	Cured.
		Breast ulc'rat'd	Operation		Hopkins [8]	Cured. Also used Finsen light.
46	2	Breast ulc'rat'd	X-ray four weeks, then operated.	9 weeks.	J. Rudis Jicinsky [5]	No recurrence.
		Breast Fungating ulcer.			Hopkins [8]	Pain and odor gone. Discharge less. Breast softer.
	2	Scirrhus Glands of axilla		Mch. 22. '02 Sept. 2, '02 44 treatm'ts.	Skinner [1]	Stopped progress. Tumor smaller.
68		Breast ulc'rat'd		Jan. 15, '02 Sept. 2. '02 18 treatm'ts.	Skinner [1]	Pain less. Ulcer healed. Glands smaller.
66	6	Breast Glands		May 17, '02 Sept. 2, '02 14 treatm'ts.	Skinner [1]	Tumor smaller, one-half. Glands nearly gone. Dermatitis June 7 to Aug. 2.
	$\frac{5}{6}$	Breast Glands		Apr. 2, '02 Sept. 2, '02 40 treatm'ts.	Skinner [1]	No pain. Tumor one-half smaller. General health better.
		Breast Glands		Mch. 17, '02 Sept. 2, '02 50 treatm'ts.	Skinner [1]	Glands gone. Tumors much better.
		Breast Glands		14 treatm'ts.	Skinner [1]	Stopped treatment. Tumors smaller. Pain less.
		Breast	Paste	Jan. 8, '02 Apr. 12, '02	Skinner [1]	Died Toxemia. Pain and local lesions stopped.
		Breast		1 month. 17 treatm'ts.	St. Bartholemew	Reduced three-quarters. Metastasis.
38		Breast	Inoperable	5 weeks.	Pusey [7]	No result.
65		Breast	Inoperable	1 month.	Pusey [7]	No result.
50		Breast	Operation	Sept. 3, '01 Jan. 24, '02	Pusey [7]	No result. Died Metastasis.

INTERNAL CANCERS

Age	Years Duration	Location	Previous Treatment	Time of X-ray Treatment	Reported by	Results
		Cervix Broad ligam'ts		4 months	Cleaves [6]	Very great improvement. Also used Marines search light.
		Vagina Abdominal cicatrix	2 operations	Dec. 20, '01 Mch. 20, '02	Skinner [1]	Tumors smaller. Stronger. First treatment relieved pain.
		Cervix Tissues around Fistula		Jan. 28, '02 Mch. 24, '02	Skinner [1]	Pain and discharge stopped. Gain in strength and weight. Died uremia.
	4	Uterus Tissues around		May 8, '02 July, '02	Skinner [1]	Discharge less. Pain not better. Died exhaustion.
	3	Uterus Abdominal Lymphatics.		Feb. 1, '02 April, '02	Skinner [1]	Pain and discharge less. Died July, '02.
	3	Uterus		April 5, '02 July, '02	Skinner [1]	Stopped treatment. Some relief, pain and discharge. Progress disease stopped.
	1 ½	Lymphatics		6 weeks. 21 treatments.	Skinner [1]	Growing worse before treatment. Stationary during treatment
		Uterus Bladder Vagina		June 20, '02 undertr'tm't Sept. 2, '02	Skinner [1]	Spasmodic evidences improvement, not permanent.
		Uterus Tissues about		May 8, '02 May 22, '02	Skinner [1]	Less hemorrhage. Less pain.
68		Pylorus		Feb. 18, '02 undertr'tm't Sept. 2, '02	Skinner [1]	Stopped opiate. Pain gone. Can eat.
		Pylorus			Morton [2]	Pain stopped. Can eat solid food for the first time in months.
		Pylorus			Morton [2]	Same as above.
44	1	Pylorus		17 treatm'ts	J. Rudis Jicinsky [5]	Tumor softer. Vomiting less. Sudden death, exhaustion or toxemia.
70		Orbit		2 months	Pusey [7]	Discharged incurable. Five months later tumor reported much smaller.
68	1	Jaw Neck	2 operations	3 months	Pusey [7]	Tumor nearly disappeared. 3 months recurrence. Died other causes.
55		Recurrent Neck	1 operation	Nov. 25, '01 Apr. 12, '02	Pusey [7]	Poor results.
60		Lower Jaw Neck	2 operations	Jan. 18, '02 Mch. 10, '02	Pusey [7]	Died. All nodules had disappeared and some sinuses healed.
71		Neck	2 operations	Oct. 24, '01 April, '02	Pusey [7]	Ulcer much reduced, then larger again.
68		Larynx		2 weeks	Morton [4]	Died, Bright's disease. Mass much smaller and softer.
		Rectum		Under treatment	Allen	Very much improved.
		Five cases abdominal reported by Pusey				All relieved of pain. One died in one w'k; one in six weeks and one in three months.

continued, and solid food was retained. One was softened after seventeen treatments, but death occurred suddenly from exhaustion or toxemia.

One cancer in the orbit was discharged as incurable by Pusey, and five months later without farther treatment the tumor had decreased very much in size. Pusey reports four cases recurrent about the neck, three of which had been operated upon twice. In these three cases the tumors nearly disappeared. One recurred, and death resulted from other causes; another patient died of exhaustion. The third tumor began enlarging again. The fourth responded poorly.

Morton reports one case in the larynx which, with two weeks' treatment, grew much smaller and softer. The man died of Bright's disease.

Allen reports one case of cancer of the rectum in a physician under treatment much improved.

Cures of cancer of the breast, primary and recurrent, are reasonably certain if undertaken sufficiently early in the disease. I find eleven cases reported cured, and seven cases improving. Most of them were under treatment at the time of the report. In two cases there was local improvement; one died of metastasis, and one of toxemia. In three cases there was no result, and one by J. Rudis Jiciusky was rayed for four weeks, then operated upon, then rayed for nine weeks with no evidence of recurrence as yet.

The *x*-ray has been tried in a number of nonmalignant diseases. Morton[2] and Wheatland[11] each report a case of chronic appendicitis in which the pain was relieved by the *x*-ray. Campbell[12] reports the disappearance of a goitre in a patient he was treating for acne. Gibson[13] reports a fibroid that had continued bleeding in spite of his efforts. One application of the *x*-ray stopped the hemorrhage, and he had a similar result each time he tried it. Stembo[14] reports twenty-eight cases of neuralgia with twenty-one cured, four improved, and four with no results. Morton reports one case of tic douloureux cured by raying the Gasserian ganglion. D. Berry Hart[15] reports two cases of chronic callous sinuses, following abdominal operations, cured with a very few treatments.

The *x*-ray has been tried in skin deseases, and Campbell[12] reports fifteen cases of acne cured. Edith Meeks[16] reports three cases of eczema cured. Two Swedish physicians[17] report the cure of eleven cases, with an average of fifteen sittings. The itching is stopped very early. All agree that it is best in chronic circumscribed patches. Wheatland reports to me personally an acute case of head, face, and neck covered with crusts, which, after ten treatments, was clearing up marvelously. Each treatment lasted about two hours owing to the large surface to expose. Pusey[7] reports case of keloid in vaccination scar. There were no results after eighty sittings, then there was sharp dermatitis, followed by rapid shrinking of the tumor. Four cases of pruritus[17] ano-vulvar are reported cured.

Pusey[7] reports the cure, in one month, of parasitic sycosis, and Reinhart[18] the cure of non-parasitic in eight treatments, and Lancashire[15] the cure with few exposures causing dermatitis, but not the falling of hair. Freud reports cases of favus cured by using the *x*-ray to remove the hair temporarily. Dickson[13] used the analgesic effects in a case of neurasthenia with marked dyspeptic symptoms, by applying the ray over the solar plexus. The patient slept during the treatment and all the next night. He had not slept all night before for months.

J. Rudis Jicinsky[20] and Boggs[19] report cases of consumption cured.

I will not burden you in this long paper with any attempt to exploit the method by which the *x*-ray produces its effects,—whether they are bactericidal, stimulating, or destructive. Nothing is certain as yet. We know that, applied to an ulcer, it lessens discharge, and makes it purulent, followed by rapid formation of epithelium and a very soft, pliant scar. We know there is danger in the ray, and in the hands of inexperienced operators it has produced disastrous results. Even the most careful application cannot always avoid a burn, which is largely due to the fact that *x*-ray effects are so late in showing themselves that sufficient radiation to produce a burn may have been given several days before the burn appears, so that subsequent treatments have been accumulative. We are always trying to produce as much effect as possible without the burn, and since some cases undoubtedly do not show improvement until a dermatitis is produced, we are on dangerous ground in every case. Morton does not stop treatment on the appearance of dermatitis, but carefully carries it on, hoping to cause tanning of the skin, which permits him to give stronger treatments, and reach internal growths.

We know that the effects of *x*-ray applications persist for a long time after the treatments are discontinued, and we must therefore not be too hasty in concluding either that there will be no good results or that our cures are permanent.

My conclusions are—

1. In superficial malignant growths, the certainty of cure by the *x*-ray is so great, and the recurrences after operations are so frequent, that it is at least an open question whether it is advisable to operate at all. Some of the men most experienced in the use of the *x*-ray, Morton among them, are decidedly opposed to any operative measures.

2. In cases that can be thoroughly operated upon, I believe a short period of *x*-ray treatment before the operation, is desirable, to destroy the outlying portions of the growths; and knowing the frequency of recurrence after operation, it seems to me there can be no question as to the desirability of giving the patient every possible chance by the immediate application of the *x*-ray, without waiting for any new growths to take place. The patient should then be carefully watched, and at the first evidence that the operation and *x*-ray treatment have been unsuccessful, the treatment should be immediately renewed.

Then we shall not have so frequently, reports of results: "died of exhaustion;" "died of metastasis;" "died of toxemia;" etc.

3. In large growths removal is desirable, or establishing free drainage to prevent auto-intoxication, which is a very real danger in aged persons or those much debilitated, as is shown by the number of patients who have succumbed to toxemia during treatment.

4. Inoperable cases should certainly be given the benefit of the *x*-ray, for we have the reports of too many that have been relieved of pain, have had foul discharges stopped, hemorrhage lessened or stopped, and their lives prolonged and made comfortable, to refuse these sufferers any chance of relief.

Most important is the fact that some such cases have been permanently cured, and in affording these inoperable cases relief we shall give to some of them restored health.

REFERENCES

1.—Advanced Therapeutics, Oct., 1902.
2.—Medical Record, May 24, 1902.
3.—Medical Record, March 15, 1902.
4.—Medical Record, Oct. 18, 1902.
5.—N. Y. Medical Journal, Aug. 30, 1902.
6.—Advanced Therapeutics, July, 1902.
7.—Journal Am. Med. Association, April 12, 1902.
8.—Philadelphia Med. Journal, Sept. 7, 1902.
9.—Western Med. Review, Aug. 15, 1902.
10.—American Medicine, Aug. 16, 1902.
11.—American Electro-Therapeutic Association, 1902.
12.—Journal Am. Med. Association, Aug. 5, 1902.
13.—Advanced Therapeutics, Sept., 1902.
14.—Journal Physical Therapeutics, April, 1902.
15.—British Med. Journal, Vol. I., 1902, page 1330.
16.—Boston Med. and Surg. Journal, Vol. II., 1902, page 153.
17.—La Semaine Médicale, No. II., 1902.
18.—Phil. Medical Journal, Feb. 1, 1902.
19.—Advanced Therapeutics, Oct., 1902.
20.—N. Y. Medical Journal, March 2, 1901.

TO CHECK HEMOPTYSIS

A. Hecht has employed with success the following pill, in checking hemoptysis in tuberculosis:

℞ Ext. ergotæ, gr. xxx.
Pulv. digitalis fol.
Ext. hyoscyami, aa gr. xx.
Quininæ sulph., gr. xxx.

M. Ft. pil No. xx. Sig.: Three to five pills may be taken daily. He believes that the real virtue of this combination in producing hemostasis lies in the quinin reinforced by the digitalis. —Jour. A. M. A.

RHEUMATIC FEVER

Tinct. Aconite Root	½ drachm
Tongaline	4 ozs.
Glycerine	½ oz.
Ess. Pepsine	1½ oz.

M. Sig.—Tablespoonful every two hours.

THE MINNESOTA STATE BOARD OF HEALTH: ITS WORK AND HISTORY

By H. M. Bracken, M. D., Secretary

MINNEAPOLIS

(Dr. Bracken has kindly furnished the Lancet advance sheets of his annual report as secretary of the State Board of Health, and it has seemed to us that the introduction to this report is well worth reproduction in our columns. And it has seemed so for two reasons: First, the high character of the Board's work has attracted international attention and commendation; secondly, the work of the Board is of inestimable value to the people of our State, individually and collectively,—individually, when the biological laboratory determines for a physician the diagnosis of a disease he is called upon to treat, and, collectively, when this work, with or without the aid of the physician, prevents the spread of contagious diseases. —the Editor.)

In presenting an introduction to another biennial report of the Minnesota State Board of Health, it may be well to say a few words in relation to preventive medicine. It is not the medical education of medical men that will bring about the greatest improvement along these lines. Rather, it is the use of such well recognized sanitary requirements as we now have knowledge of.

Too often it is the case that the physician who is acting as health officer in a village or city, is handicapped in the performance of his duties by the ignorant opposition of the laity and the commercial opposition of certain of his brother practitioners. The former should be overcome by a united effort of the medical profession to educate the people as to the actual needs in connection with isolation, disinfection, and quarantine. This can best be accomplished through local sanitary organization, which should be made up of the prominent people of the village or city.

If the people understand the causes of the various communicable diseases, the manner in which these causes are transmitted from one person to another, and the means to be used to prevent such transmission, the duties of the medical profession will be made easy, and there will be no occasion for the continued opposition to the health officer by those unprincipled physicians who try to make professional capital by siding with the quarantined individuals in their opposition to sanitary requirements.

If the sanitary education of the laity in villages and cities is carried out, it will greatly aid in the elimination of preventable diseases from such places. It will then become necessary to extend this educational work to the country districts. Here a somewhat different plan will have to be carried out so far as the laity is concerned, for the population is too scattered. Still further, the sanitary demands are more easily fulfilled, for with a scattered population the danger of spreading infectious diseases is much less than that existing in villages and cities. For example: If diphtheria should appear in a family in the country the disease should be easily limited to the one family, provided the disease is recognized early, for there need be no direct communication between those who are hosts of the diphtheria bacillus and the people who are germ-free in the surrounding country. Such isolation of all hosts of the diphtheria bacillus in a village or city is sometimes secured only with great watchfulness.

Sanitation in the country districts can be made efficient through a thorough education of the township officials in matters pertaining to infectious diseases, and by the close association of such officials with intelligent county and state sanitary officials. As yet the county sanitary official can hardly be said to have an existence in this state. A bill was passed by the legislature of 1901 providing for a county health officer, but this made little provision for him to exercise intelligent authority. There is practically nothing in the way of a sanitary advisor between the State Board of Health and the township officials. It too often happens, therefore, that when sanitary problems present themselves in country districts no effort is made to deal with them until the conditions demanding attention become wide-spread and alarming.

Every county should have an intelligent medical health officer. Such officers should be men of ability, with a good standing in their profession; and they should be men who command the respect of the community in which they live. They should receive reasonable compensation for their services. They should be worthy of their hire, looking at the matter from both the sanitary and commercial point of view, for through their efforts lives are saved; and at the same time expense should be reduced to a minimum, for both individuals and the county. As a money investment a county health officer, provided he is a man of intelligence and at the same time conscientious and thoroughly honest in his dealings, should be an important element in every county in this state.

With such organizations as now exist and should exist, as thus outlined, the sanitary machinery should be put into perfect condition. In the country, the township and the county health officers should work together; in villages and cities the sanitary organizations and the health officer should work together. Still further: all of these organizations should join hands with the state board of health, in order to secure the best results for the entire State.

To bring about this latter proposition nothing can be of more value than the Minnesota State Sanitary Association, which was organized in January. This organization should have among its members every health officer throughout the state, and also a strong representation from the laity and the various professions.

This Sanitary Conference passed a resolution requesting the president for this year to urge local authorities to send their health officers to this association, paying their expense while in attendance.

To place the sanitary machinery, outlined above, in thorough working order, it will be necessary to secure a revision of our present sanitary laws.

What is secured through preventive medicine? The removal of disease causes, diminished suffering, fewer premature deaths.

Who should have the greatest interests in such matters? The public. As a matter of fact, however, the general public is apparently lukewarm, while the medical profession is at work. Strange indeed is this. A profession working apparently to remove the causes for its existence, while those who are receiving the benefit look on with indifference.

It is true tuberculosis has become such a scourge that organizations looking to its suppression have started up, and these reach the public in ways that are practical and beneficial, but this is but a drop in the bucket. Consumption kills its thousands; but the polluted drinking-water, the lack of sanitation at home and in public places, the selfishness that leads us to consider our own temporary inconvenience rather than the good of our neighbor—these all have a place in causing unnecessary suffering and death.

King Edward, in discussing tuberculosis at a recent Congress in London said: "If preventable, why not prevented?" The same can be asked with equal pertinence of a list of diseases that is constantly growing larger as we learn more of their cause. The public is best reached through systematic organizations, and these, when of the best type, consist of many parts working as a unit.

Preventive medicine can be studied to advantage through civic leagues, improvement socities, various women's organizations, etc. Women's organizations should have a prominent place in this work, for there is no one who suffers to a greater extent because of preventable diseases than the mother. Sickness means nursing, worry, exhaustion, and money loss; and sickness in a family throws all this upon the mother. Why should she not be indignant when a preventable disease appears in her household?

Second only to the organizations just referred to are the public schools. Teachers should have at least fair sanitary training and should make good use of their knowledge. One has but to note the increase in diphtheria, scarlet fever, etc., upon the opening of schools in the fall, to realize the powers that teachers can and should use in the prevention of disease. A child with a suspicious sore throat may attend school. A teacher may assume that it is no part of her duties to note such fact. Her indifference may be followed by many cases of diphtheria, much suffering and death, demoralization of the school, and even financial demoralization throughout the community. On the other hand, a hint from the teacher that a child had a sore throat should lead to a prompt medical examination of the suspected individual, its exclusion from school, and the removal of all further danger from infection. Many teachers realize their responsibility in connection with sanitary matters, and are of great assistance to health officers. Teachers should be instructed in matters pretaining to sanitation at their various gatherings (summer schools, etc.), or during preparation for their life-work at normal schools, high schools, universities, etc. Not enough attention is given to these matters in this State at the present time.

The work of the board has progressed favorably during the past two years. The office capacity has been greatly increased and improved at but little expense, by simply converting two rooms that had formerly been used as store-rooms into an office for the Secretary and a filing-room. By this arrangement it was possible to set aside one room for the Director of the Veterinary Department, and one room for the stenographers. The demands upon the Secretary and upon the entire clerical force have been constantly increasing. The smallpox epidemic has required much attention, and to a certain extent has interfered with the introduction of new sanitary problems.

It is scarcely necessary in this introduction to speak of the laboratory, for the report of its director shows fully the work that is being done along the lines of investigation, both for infectious diseases of men and of animals.

Suffice it, then, to say that under the directorship of Dr. Wesbrook the laboratory has come to be a most important part of the State Board of Health. The work done upon diphtheria alone has been of sufficient importance to justify the maintenance of the laboratory, for not only has this been of inestimable value to physicians throughout the state, but it has also received the recognition of scientific men far and wide. But the work of the laboratory has by no means been confined to routine and research as pertaining to this disease, for the report of its director shows plainly that many other diseases of mankind have received due consideration.

Not least in importance as pertaining to the laboratory work is its bearing upon the infectious diseases of animals, as shown by the reports upon rabies, hemorrhagic septicemia, glanders, hog-cholera, etc. The animal-house now under construction will greatly facilitate the laboratory in its study of communicable diseases.

The work of the veterinary department has been most satisfactory under the able direction of Dr. S. D. Brimhall. The advantages gained by the study of infectious diseases of men and animals under one and the same department are continually emphasized in the present methods of our Board. The laboratory work, as carried on for both divisions under one and the same directorship, is of great economical advantage to the State. So, too, is the opportunity for consultations between the director of the veterinary department, the secretary of the board, and the director of the laboratory. In addition to the economical gain to the State through such consultations is the advantage of joint study of diseases that are transmissable from animals to man, as shown in the study of bovine tuberculosis, rabies, glanders, trichinosis, etc. I think it can safely be said that in no state in the Union has there been better work along the lines of infectious diseases of men or animals during the past few years than in Minnesota.

The chemical work of the board has been excellent so far as it has been possible to carry it out. Unfortunately, the lack of funds has interfered materially with this part of our duties to the State.

HISTORY OF THE BOARD

In 1872 a bill was presented to the State Legislature looking to the establishment of a State Board of Health. The bill was passed, and approved March 4, 1872. It provided for a board consisting of seven physicians, each member to hold office for a term of four years. Governor Horace Austin thereupon appointed Drs. D. W. Hand, of St. Paul, A. B. Stuart, of Winona, N. B. Hill, of Minneapolis, A. W. Daniels, of St. Peter, and C. N. Hewitt, of Red Wing, and instructed Dr. Hand to call the first meeting. This meeting was held in St. Paul, March 26, 1872. Dr. A. B. Stuart was chosen president and Dr. C. N. Hewitt permanent secretary. Later in the year Drs. Vespasian Smith, of Duluth, and G. D. Winch, of Blue Earth, were added to the Board.

Dr. Stuart, the first president, held his membership but one year, withdrawing at that time on account of ill health. Dr. Hand succeeded Dr. Stuart as president, and continued to hold this office until the time of his death, June 1, 1889, a period covering seventeen and a half years. Dr. Franklin Staples, of Winona, who had been appointed to the Board to succeed Dr. Stuart, was elected president following Dr. Hand's death, and he has served in that capacity up to the present date, covering a period of thirteen years. Dr. C. N. Hewitt, one of the original members of the Board, served as its secretary from March 26, 1872, to the date of his retirement from the Board, January, 1897, almost twenty-five years.

The sanitary laws were revised in 1883.

In 1894 the membership of the Board was increased to nine.

From the time of organization to May, 1894, the office of the Board was at Red Wing. It was then moved to St. Paul, and located in the Pioneer Press Building, there being no vacant space in the Capitol building. The same year rooms were assigned to Dr. Hewitt in the upper floor of the Mechanics Arts Building (University of Minnesota), and here he conducted the chemical and bacteriological examinations for the Board.

In 1896 Dr. F. F. Wesbrook of Minneapolis was made a member of the Board and, in April of the same year he was elected to serve as bacteriologist. At this time the bacteriological work of the Board was transferred from Dr. Hewitt's laboratory to rooms assigned for this special work in the Laboratory building of the Medical Department of the University. The chemical work of the Board was continued under Dr. Hewitt's direction.

In 1885 the first law relative to the infectious diseases of animals was passed, and this work was placed under the control of the State Board of Health.

In 1897, Dr. M. H. Reynolds, veterinarian at the Experiment Station and teacher at the School of Agriculture, University of Minnesota, was made a member of the Board, taking Dr. Hewitt's place, his term having expired. Dr. Reynolds was first made chairman of the committee on infectious diseases of animals, but soon after his appointment the Board created a distinct veterinary division, of which he was made director. This position he held until August first, 1900, conducting the duties of this department from his office at the Experiment Station. In 1900 it was thought desirable to concentrate the executive work of the Board as far as possible, and the veterinary division's headquarters were transferred from the Experiment Station to the general offices of the Board in the Pioneer Press Building. Dr. S. D. Brimhall, who had been serving as Field Veterinarian under Dr. Reynolds from February, 1897 (appointment for regular work began August first, 1897), was placed in charge of the veterinary work that had previously been carried on by Dr. Reynolds. At the meeting of the Board July 9, 1901, Dr. Brimhall was given the title that had formerly been held by Dr. Reynolds, viz., Director of the Veterinary Department.

With the growth of the State, the work of the Board has constantly been increasing. In 1894 when the office was removed from Red Wing to St. Paul there were five persons connected with the Board, the Secretary, four clerks, and a chemist; at the present time (1902) there are eighteen individuals in the employ of the Board.

The work of the Board consists of—

(1) Executive duties, under the Secretary.
(2) Vital Statistics, under the Secretary.
(3) Clerical duties, under the Secretary.
(4) Laboratory work, under a Director.
  (a) Bacteriological, routine and research.
  (b) Chemical, routine and research.
(5) Veterinary work, under a Director.
  (a) Executive and in field.
  (b) Laboratory, routine and research.

ST. BARNABAS CLINIC

SERVICE OF C. H. HUNTER, M. D.

MINNEAPOLIS

THE HIP-LEG PACK

The two following cases illustrate an effective method of controlling a local non-suppurative inflammation:

CASE 1.—Mrs. X——, aged 23, married one year, when a girl, suffered a retroflexion which was controlled satisfactorily by a pessary. Soon after marriage there was an involuntary miscarriage ending in a retroversion, endometritis and menorrhagia.

Curetting was done, and the round ligaments were shortened by stitching a fold to the anterior uterine wall. At the same time a cyst, the size of a hen's egg, in the prolapsed and tender ovary, was incised. A rapid recovery from all bad symptoms followed. Three weeks thereafter the patient stood upon the icy pavement a half hour waiting for a car. In a few hours she had serious pelvic pain, chilliness, and moderate fever. The incised ovary was large and tender, and the whole broad ligament was stiff, sore and infiltrated.

The patient was readmitted to the hospital Feb. 17. No morphine was given. Frequent large, hot douches and a daily enema were resorted to, but the most decided relief came from the hot hip-leg blanket pack, and an ice-bag over the inflamed area. These were continued twice daily, at first for two hours, then for one hour for two weeks. She was kept in bed two weeks longer over a menstrual period for the neurasthenic condition into which she had fallen.

She was discharged completely cured March 14th.

This patient seen recently, is found to be free from pelvic pain and swelling, and is in prime condition.

CASE 2.—Mrs. S——, aged 35, one child, cervix torn, subinvolution, endometritis fungosa, hypertrophied cervix; tender, swollen left broad ligament, either from the confinement or incident to her business (femme de joie).

Curetting and amputation of the cervix (Ochsner) were resorted to. The eighth day after the operation there was some chilliness; temperature 101°; and a massive, tender swelling appeared in the left broad ligament. The hot hip-leg pack and ice-bag over the swelling were again resorted to, as described and illustrated by Baruch in Hydrotherapy, viz., first a dry blanket, reaching from the waist to eighteen inches below the feet; a second blanket, slightly smaller, wrung out of very hot water, spread upon the first, and both tucked and smoothed about the limbs so that there could be no free evaporation, and the ice-bag tucked under the upper end.

The operation was done January 25; the patient was discharged, free of pain and swelling, March 6. In neither of these patients was there ever fluctuation, nor did the leucocytes rise above 10,500, that is, there was no pus. Of course it may be suggested that four weeks in bed is excellent treatment for this sort of inflammation, which is true; but the attendant is meanwhile often at his wit's end to keep the patient comfortable. The pack does stop the pain, and seems to hasten the absorption of the exudates.

Of course if there were pus other means should be resorted to; but for a non-suppurative inflammation this hydrotherapeutic measure fulfills a number of indications better on the whole than drugs.

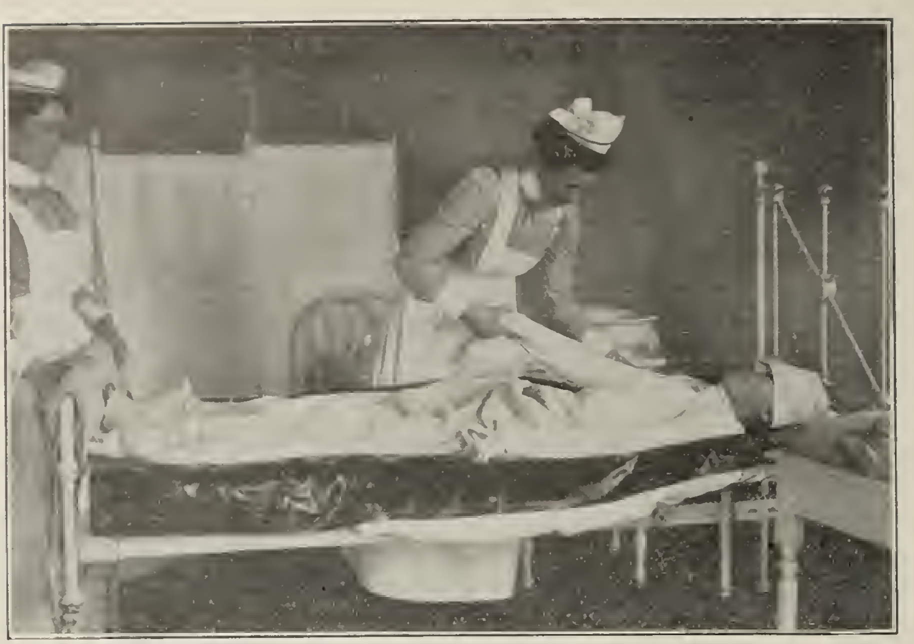
THE TOWEL PACK

While it is the general consensus of opinion that the plunge or Brand bath is the most effective means of combating typhoid fever, still it is carried out with so much difficulty in private practice that it is desirable to have substitutes. The objections to the plunge are fairly well met with in the sponge bath, the sheet pack, or contrivances for the full bath in bed.

We find at St. Barnabas that all the conditions are most conveniently and efficiently met by the towel pack as developed during the past season by the superintendent of nurses. The patients prefer the bath in this form to the ordinary sponge baths, for they are less disturbed and tired by it.

The illustrations and list of requisites published herewith, should enable even an amateur to duplicate this very efficient bath with definiteness and precision:

REQUISITES: A rubber sheet, a common sheet;



IN PROCESS. Second Step

and a blanket cover. 1st table, hot water bags and whisky. 2d table, bowl for ice and one for water. Seven heavy bath towels and reserve towels, the towels to be without fringes.

TECHNIQUE.—

1st step.—Put the patient on the rubber sheet, covered by a blanket.

2d step.—Heat towel; blanket removed as wet towels (temperature 65°) go on chest, arms, abdomen, and legs.

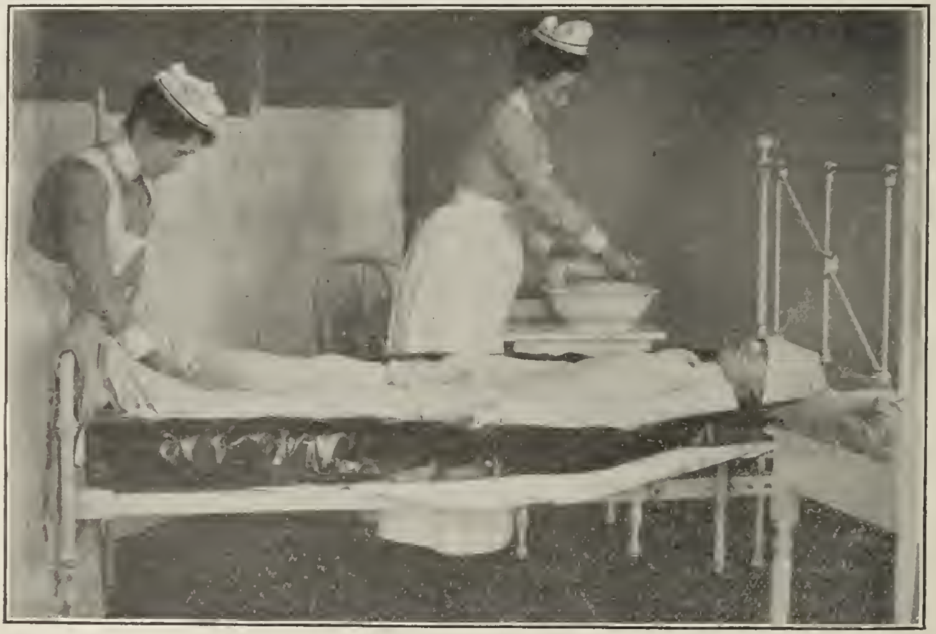
3d step.—Packed; towels being wrung to replace first set, leaving no part uncovered for a moment.

4th step.—Replace the warmed towels with fresh cold ones.

5th step.—Front towels still clinging while the back is being covered; ice-rub over towels.

6th step.—Towels removed; patient dried and uncovered.

Time.—Thirty minutes.



COMPLETE. Third Step

NORTHWESTERN LANCET

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NOVEMBER 15, 1902

PARAFFIN FOR NASAL DEFORMITIES

At the meeting of the Canadian Medical Association in Montreal, Dr. G. Grimmer of that city read a paper on the use of subcutaneous injections of paraffin for correcting deformities of the nose. The British Medical Journal for September 13th contains an article by Stephen Paget, F. R. C. S., devoted to the same subject. The procedure has been practiced several times with satisfactory results.

The paraffin is first sterilized and injected by means of a sterilized syringe. The paraffin must be kept 10° or 15° F. higher than its melting-point, 115° F. The injection is made in the middle line of the nose, and the needle is directed away from the eyelids to protect the canthus from invasion.

The point of entrance under the skin should be nicked with a scalpel, the assistant making firm and constant pressure all around the nose until the paraffin is set. No after-results, other than a little pain and occasional swelling of the nose, have been noticed. The paraffin is not absorbed, and therefore the deformity is permanently relieved.

MEDICAL MONSTROSITIES

The ubiquitous life-saver has again announced a new galvanizer to heal the dying and restore the dead. Dr. ——, a homeopathic physician of Alexandria, Ind., has discovered a compound of choride of sodium, an oleoresin, and volatile ammonia in the form of a powder that will work wonders—according to the newspapers.

The discoverer thinks that volatile magnetism is the principle underlying life, and that the cell plays an unimportant part in the economy. Evidently the work of the great Virchow was an unnecessary step, and does not fully explain the great principle that underlies the development of tissue. The same newspaper that extols Virchow and his life-work gives the same amount of space to this new and unscientific statement of an obscure man who claims to do wonders with an inert compound.

And the newspaper clipping announces the astounding performance of a Russian surgeon who succeeded in removing the heart for manipulation and repair, replacing it in such a condition that it resumed its functions regularly and normally. A scrap-book of clippings of this order would demonstrate the ability of the reporter to stretch his imagination in true elastic dimensions, and the only difficulty is the breaking of the elastic and the separation of facts and deductions, resulting in ridiculous and disjointed statements. The public are more or less inclined to believe the statements and to flock to the new remedy and its proprietor for relief, willing to be experimented upon and gladly paying for the privilege. The remedy for incongruities of this order is a counter-statement explaining the impossibilities and improbabilities of remedies and operations that have no substantial foundation in fact or theory.

LARGE FEES FOR MEDICAL MEN

Dr. Adolph Lorenz, the eminent orthopedic surgeon who came from Vienna to Chicago to perform the bloodless reduction for congenital dislocation of the femur on the daughter of J. Ogden Armour, is credited by the press as receiving a fee of one hundred and fifty thousand dollars. As a matter of fact, as stated in a letter to the N. Y. Medical Journal by Dr. John Ridlon, the fee was thirty thousand dollars. This included the services of his assistants, one from Vienna and one from New York, the after-treatment here, and in Vienna next May when the splints are removed.

The "newspaper fee" is a sample of what professional men are supposed to receive on rare occasions. In this case the actual fee was one-fifth of the advertised amount.

Dr. Lorenz was well paid for his trip and the operation, yet when one considers the large number of charity cases that he has so graciously examined and operated upon by his expert methods, he has not been overpaid. Fortunately, Mr. Armour is amply able to pay any fee, and doubtless feels that he has done much good by sending for Dr. Lorenz, even though he traveled across one-half of the continent.

The benefits accruing to the poor children will amply repay in gratitude the seemingly large fee. When a men is able to pay well for professional services he should consider the vast amount of charity work done by the physician and surgeon. It is one of the methods of equalization of values in our world, and is probably appreciated most fully by the wealthy and professional classes. It does not appeal to nor is it understood by the majority of people. There are too many who belittle the physician; who demand his time, experience, and skill at the lowest possible rate, forgetting that his advice is given, and is as valuable as his medicines, and is the direct result of his study and observation.

The average physician is modest in his demands, thinks too little of the commercial side of his life, present and future, and is generous in the extreme in giving advice and caring for the sick. If the doctors would follow in the footsteps of the lawyers, and make their charges according to the responsibilities involved and the status of the individual, charging the wealthier classes good fees, the middle class moderate fees, and the poor only what they are able to pay, or no fee at all, the scales would soon balance.

HORSE-KILLING DISEASE

The farmers of the Red River valley and adjacent regions in Manitoba have suffered the loss of many horses from some endemic or epidemic disease. Its exact nature is to be determined by laboratory experiments.

It attacks horses of all ages, and frequently the infection runs through a farmer's entire stock. In some places a few horses are spared, only to be attacked the following year. The month of July is the most active part of the season, and from that time on until the winter the disease prevails with more or less intensity. In one spot in the Red River valley, six miles long and two miles wide, one hundred horses have died in the past ten months.

The disease is essentially chronic, running a course of a few weeks to a few months. It has been called by various names, all of which indicate a probably miasmatic origin. The farmer calls it swamp-fever, and believes that it is caused by eating old, coarse hay. By others it is designated pernicious anemia, progressive in type. The blood-tests show a reduction of hemoglobin to 40 per cent. The red-blood cells are diminished in numbers, and are irregular in outline. The count shows the reduction of red cells as low as two or three million. A third diagnosis is that of malaria, intermittent in form, but accompanied by the usual rigors and sweating.

The investigations as to the actual cause of the disease are still in progress, and the results will be announced through the proper channels when the experiments are concluded. Many autopsies have been made on animals that have died from the disease, and upon others killed during the active stages. So far one micro-organism has been isolated, the bacillus septicemiæ hemorrhagicæ, also a bacillus remotely related to the colon bacillus. These bacilli have also been found in the urine in some of the cases.

Dr. Wesbrook, the state bacteriologist, and Dr. Brimhall, the veterinarian of the State Board of Health, have been in consultation with the provincial bacteriologist, Dr. Gordon Bell, of Manitoba, and Dr. Torrance, the bacteriologist of Winnipeg. Nothing will be left undone to reach the foundation of the infection.

It is gratifying to know that the Minnesota State Board of Health is so well equipped with experts to carry on original research. Dr. Wesbrook is a bacteriologist upon whom full reliance can be placed. His skill and thoroughness have been recognized by his colleagues in bacteriology in the United States and Canada. The investigations carried on by him and his associates, Drs. C. Wilson and Chowning in Idaho, during a recent epidemic of mountain-fever, in which the wood-tick was found to be the carrier of the infection, have put the officers of the State Board of Health in an enviable position. Dr. Adami of Montreal, who has always taken the deepest interest in such investigations, expressed his admiration for the work and the men.

BOOK NOTICES

Essentials of Histology. By Louis Leroy, B. S., M. D., Professor of Histology and Pathology, Vanderbilt University, Medical and Dental Departments; Pathologist to the Nashville City Hospital, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. 16 mo. volume of 263 pages, with 92 beautiful illustrations. Cloth $1.00 net. Philadelphia and London: W. B. Saunders & Company. 1902.

The second edition of this convenient book, contains within its pages the essentials of histology for the beginner, the practitioner who is "rusty," and the older doctor who had no opportunity to study the subject in his younger days.

The understanding of histology is essential in the appreciation of pathology. This work, although small, but well illustrated, will do much to refresh one's mind until he has time for a more thorough investigation of the subject.

The chapters are conveniently arranged and printed in display type. The chapter on "Technic" has been enlarged, a description of the appendix and rectal valves added, and the whole work revised.

Clinical Psychiatry. A Text-Book. For Students and Physicians. Abstracted and Adapted for the Sixth German Edition of Kraepelin's "Lehrbuch Der Phychiatrie." By Ross Defendorf, M. D., Lecturer in Psychiatry in Yale University. Price, $3.50. New York: The Macmillan Company.

Kraepelin's views of psychiatry have been abstracted and adapted to make a concise textbook for American students, naturally the classification, terminology, and the phraseology are Kraepelinian. The author has abbreviated the description of some psychoses, and left out some other less important matter. To compensate for any omissions he has laid more stress upon important subjects; such as the description and treatment of acquired neurasthenia, epileptic and hysterical insanity, and the traumatic neuroses.

If one compares this work with that of a standard English author, he will find some discrepancies, diametrically opposed opinions, and strange terminology. This rather adds than detracts from the value of the work. What we need to stimulate our interest is just this sort of a book.

The illustrations representing the various forms of insanity are unusually good. The text is interesting, and the field is covered sufficiently to make the work of value to the general as well as the special practitioner.

Diphtheria. By Wm. P. Northrup, M. D., of New York. Measles, Scarlet Fever, and German Measles. By Professor Dr. Th. von Jurgensen, Professor of Medicine in the University of Tubingen. Edited, with additions, by William P. Northrup, M. D., Professor of Pediatrics in the University and Bellevue Medical College, New York. Handsome octavo, 672 pages, illustrated, including 24 full-page plates, 3 of them in colors. Cloth, $5.00 net. Half Morocco, $6.00 net. Philadelphia and London: W. B. Saunders & Co., 1902.

This volume, the third in the series of English translations of the "Nothnagel System of Practical Medicine," needs no recommendation. Professor Jurgensen and Dr. Northrup are too well known for us to expect anything but the best. The article on diphtheria, entirely original with the editor, is fully in keeping with the high standard set by the other German articles which comprise the work. Dr. Northrup, having been associated with Dr. O'Dwyer at every step in the perfection of intubation tubes, is particularly fitted to describe this aspect of the treatment of diphtheria.

Professor Jurgensen's monograph on measles unquestionably is the most comprehensive contribution on that infection that has appeared, bringing out so fully the valuable Danish records of the Faroe Islands epidemic. His exposition of scarlatina is unrivaled both for richness of clinical detail and exactness and clearness of statement. "Fourth Disease" and German Measles have been accorded spaces consistent with their importance. The editor has shown judicious decision in his extensive additions, making the work far and away the best and most up-to-date treatise of the subjects extant. The book is profusely illustrated.

MISCELLANY

ARTICULAR RHEUMATISM

Dr. F. W. Stewart, late assistant physician to Milwaukee County Hospital, reports excellent results from the use of Lambert's Lithiated Hydrangea in the treatment of two cases of complicated articular rheumatism due to excess of uric acid in the system, and which had resisted the remedies usually prescribed in such cases. The lithiated hydrangea was administered in one dram doses, three times daily; the effects were prompt and satisfactory, a complete recovery resulting after two weeks' medication and diet.—Peoria Medical Monthly.

AN IMPROVED METHOD OF PERCUSSION

The limitations of percussion in thoracic and abdominal disease are quite well understood. In the majority of instances percussion is carried out by tapping with the fingers of the right hand upon the backs of the fingers of the left hand laid flat upon the heart. There are certain limitations to percussion when performed in this manner that do not obtain when some substance other than the fingers is brought between them and the wall of the cavity to be percussed. The fingers may not fit the part accurately. They inevitably cover a considerable surface, and consequently the vibrations are conducted over a considerable area. Various substitutes for the finger, made of rubber and celluloid, have been devised, which have for their general purpose the limitation of the area which is to be percussed. The disadvantage of these, as compared with the finger, is that the sense of resistance which is of such value in diagnosis is left out.

A method devised by J. Plesch, of Budapest, combines both methods to advantage. He uses the middle finger of the left hand, but instead of laying it flat upon the chest, only the tips of the fingers are brought in contact with the part to be percussed. The finger is bent at a right angle at the second joint and the percussion is made over the first phalanx. In this way the vibrations are limited to a small area, and are accurately brought out; at the same time the vibrations are conducted to a considerable depth into the tissues, because of the limitation of the surface application. More precise data are furnished by this method of percussion than by the usual means. The value of the method has been proven by Plesch, who has confirmed the results by radioscopic examination.—Medicine.

A NEW CURE FOR NEURALGIA

A recent number of La Nature publishes a remedy for neuralgia which is said to have been used with good results. Neuralgia proceeds sometimes from a lesion, or functional derangement of the nervous centers, and sometimes from an inflammation of the nerve, and is accompanied by pains peculiarly violent. The complaint is also extremely rebellious to treatment; in many cases no relief can be gained except by the most radical measures.

Dr. Cordier, a surgeon of Lyons, has thought out a mode of treatment based on the fact that in certain cases of obstinate sciatica the nerve has been cut down upon and drawn. M. Cordier thought that if the peripheric network were treated in a similar way, the effects might be as beneficial. In order to distend the network of nerves he has used gaseous injections and insufflations of air.

The ordinary hypodermic needle is sufficient to make the insufflations of air, and a rubber ball will serve as an insufflator, but small bellows, like that of the Potain apparatus, will answer the purpose better. To remove all danger of infection a glass filled with sterilized wadding can be placed between the rubber bulb and the needle.

The needle is then buried in the cellular subcutaneous tissue, when a certain quantity of air, variable according to the locality, is slowly injected. This procedure is followed by a distention of the skin resembling a ball. In order to bring about the distention and elongation of the fine nervous terminations, M. Cordier states that vigorous massage should be practised over and in the neighborhood of the air ball, so that the air may be diffused.

The results of this treatment are declared to have been very successful, according to the initiator of the remedy, who claims to have had but two failures in twenty-five cases of sciatica treated in this way.—Medical Record.

THE ACQUISITION OF CLINICAL WISDOM

In the course of a recent address before the Canadian Medical Association Dr. William Osler made the following pertinent comments: "Medicine is a most difficult art to acquire. All the college can do is to teach the student principles, based on facts in science, and give him good methods of work. These simply start him in the right direction, they do not make him a good practitioner—that is his own affair. To master the art requires sustained effort, like the bird's flight, which depends on the incessant action of the wings, but this sustained effort is so hard that many give up the struggle in despair. And yet it is only by persistent intelligent study of disease upon a methodical plan of examination that a man gradually learns to correlate his daily lessons with the facts of his previous experience and with that of his fellows, and so acquires clinical wisdom. Nowadays it is really not a hard matter for a well-trained man to keep abreast of the best work of the day. He need not be very scientific so long as he has a true appreciation of the dependence of his "art on science," for, in a way, it is true that a good doctor may have practice and no theory, art and no science. To keep up a familiarity with the use of instruments of precision is an all-important help in his art, and I am profoundly convinced that as much space should be given to the clinical laboratory as to the dispensary. One great difficulty is that while waiting for the years to bring the inevitable yoke, a young fellow gets stale and loses that practised familiarity with technique which gives confidence.

"I wish the older practitioners would remember how important it is to encourage and utilize the young men who settle near them. In every large practice there are a dozen or more cases requiring skilled aid in the diagnosis, and this the general practitioner can have at hand. It is his duty, and failing to do so he acts in a most illiberal and unjust way to himself and to the profession at large. Not only may the older man, if he has soft arteries in his gray cortex, pick up many points from the young fellow, but there is much clinical wisdom afloat in each parish which is now wasted or dies with the old doctor, because he and the young men have never been on friendly terms.

"In the fight which we have to wage incessantly against ignorance and quackery among the masses and follies of all sorts among the classes, diagnosis, not drugging, is our chief weapon of offense. Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment when treatment is useless, and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks."

THE HEARING OF SCHOOL CHILDREN

The health of school children is rightly now considered to be of paramount importance. Most civilized countries have a more or less efficient system of school inspection by medical men. New York and certain other cities of the United States are in the van in this movement. Of all the complaints, perhaps, to which the young are subject, none are more serious or more frequent than ear affections. Defective hearing is far more common than is generally supposed, and less attention is usually paid to it than its gravity demands.

According to the Medical Times and Hospital Gazette, at a special meeting of the Otological Society of the United Kingdom, held on April 14, of this year, the report of Mr. Arthur Cheatle on the examination of the ears of a thousand school children was read. Out of this number the ears were normal in only 432—or under 50 per cent. Middle ear disease was that with which the majority were affected, the numbers being —external ear, 49; middle ear, 518, and internal ear, 1. The test used by Mr. Cheatle was the whispered voice at eighteen feet, and the hearing was found to be more or less deficient in 520. Eighty-seven children were found to be suffering from chronic middle-ear suppuration. Of these children 71 had adenoids. The number of cases of deafness from post-suppurative conditions was 247, and of these 171 had adenoids. There were 166 cases of non-suppurative middle-ear deafness; of these 141 had adenoids. Adenoids were present in 434 children, and of these aural trouble was present in 394. Only 40 had normal ears.

This is a seriously alarming state of affairs, and as the writer in the Medical Times remarks, it is by no means creditable that the two greatest countries of the world—Great Britain and America—should have so little thought for the aural well-being of their children. The remedy suggested is that otological specialists should be attached to all large general hospitals, and that aural surgery should be included in the curriculum of the medical student.—Medical Record.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. Andrew Naegeli, of Hutchinson, has moved to Gibbon, Minn.

Work has been begun at the new Lenont hospital at Virginia, Minn.

Dr. J. A. Regnar, of Wheaton, Minn., has removed to Alexandria.

Dr. Henry Jones, of Preston, Minn., has gone to Illinois for a short vacation and a rest.

Dr. R. H. Ray, of Walnut Grove, Minn., has fully recovered from a very severe illness.

The Minnesota Valley Medical Society will meet Dec. 2d, and will have a fine program.

Dr. Nissen, of Albert Lea, Minn., has returned from his visit to Norway, and resumed his practice.

Dr. Ira Bishop, of Blue Earth City, Minn., had his leg broken last month by the kick of a broncho.

Dr. J. De Mott Guthrie, of Luverne, Minn., was married last month to Miss Edith Cox, of Farmland, Ind.

The physicians of Beltrami, Cass, and Hubbard counties organized a medical society last month at Bemidji.

Dr. C. B. Strang, of Sisseton, S. D., was married last month to Miss Clara McPherson, of Washington, S. D.

St. Mary's Hospital of Rochester, Minn., is to be enlarged in the spring. The new addition will cost about $50,000.

Dr. Horace W. Sherwood, of Belmore, Ohio, has located at Doland, S. D. Dr. Sherwood is a graduate of Ann Arbor.

Dr. A. M. Crandall has given up practice at Hokah, Minn., and has been succeeded by Dr. G. R. Reay, of Beacon, Iowa.

Dr. Helen Houghes, of Mankato, Minn., has gone to Europe to make a special study of the diseases of women and children.

Dr. F. H. Gambell, of Thief River Falls, Minn., was married in October to Miss Helen Fernstrom, of Lone Tree, Iowa.

Dr. James Beaty, of Oak Center, Minn., was operated upon last month for appendicitis. The operation was performed in a Minneapolis hospital.

The opening of the new hospital at Perham, Minn., on the 30th ult. showed the interest the public takes in such an affair. It was very largely attended.

Dr. A. J. Stowe, of Rush City, Minn., has gone to British Columbia for an outing and on business. Dr. Cameron, of St. Paul, is attending to his practice.

Dr. Bryce, the secretary of the Provincial Board of Health, of Manitoba, advocates the establishment of public vaccination stations to train men to vaccinate.

Dr. W. H. Lincoln, who recently removed from Wabasha to Winona, and is now associated with Dr. D. A. Stewart, will hereafter limit his practice to surgery.

Dr. S. C. Schmit, of Blue Earth City, was married last month to Miss Fannie E. Robbins, of Austin. Dr. Schmit graduated from the State University with the class of '01.

Dr. Karl A. Danielson, a graduate of Rush, has located at Twin Valley, Minn. Dr. Danielson spent a couple of years at the Norwegian Tibitha hospital under Dr. Christian Fenger, who was at that time surgeon-in-chief of that institution.

The Red River Valley District and County Medical Society was organized at Crookston last month with the following officers: Dr. Charles E. Dampier, of Crookston, president; Dr. G. A. Wattam, of Warren, vice-president; Dr. Halvor Holte, of Crookston, secretary.

The physicians of Clay and Becker counties met in Moorhead last month and organized a society, with the following officers: F. H. Alexander, Barnesville, president; L. C. Weeks, Detroit, vice-president; L. W. Hyde, Moorhead, secretary and treasurer; Board of Censors: Dr. R. Patterson, Barnesville; Dr. D. C. Darrow, Moorhead; Dr. E. R. Barton, Frazee. The next meeting of the society will be held in Moorhead on the second Thursday in January.

The West Central Minnesota District and County Medical Society was organized at Morris, Minn., last month. It is composed of the counties of Stevens, Big Stone, Traverse, and Pope. The following officers were chosen: Dr. Hulburd, Morris, president; Dr. Christianson, Starbuck, vice-president; Dr. Bolsta, Ortonville, secretary; Dr. Elsey, Chokio, treasurer; Drs. Karn and Randall of Big Stone, Lamb and Nealey of Traverse, Gibbon and Eberlin of Pope, Cuff and Thorson of Stevens, censors.

The following physicians were licensed last month to practice in North Dakota: W. F. McManus, Ellendale; E. S. Fitzmaurice, Crystal; Geo. J. Hanley, Perham, Minn.; M. A. Stewart, Omemee; J. Esler, Dresden; D. Hugh Newcamp, Fessenden; C. E. Conrad, Stanley; J. R. Trustcatt, Binford; F. J. Christie, Minnewaukan; R. H. Hardman, White Earth; E. E. Martin, Kensal; E. Lohrbauer, Northwood; J. E. Siegorfrdt; G. H. Willer, Donnybrook; F. P. Rasmunson, Hoople.

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REPORT OF A GRAVE CASE OF TETANUS TREATED WITH VERATRUM VIRIDE, WITH RECOVERY*

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MINNEAPOLIS

Among all the diseases which we are called upon to treat there is none possibly which causes suffering quite so horrible and awe-inspiring as tetanus. In the vast majority of the severe cases the progress of the disease is apparently so little influenced by any plan of treatment and the result is so invariably fatal that the attendant is very liable to feel hopeless from the start, and makes only an effort to relieve the suffering and produce euthanasia. Thus Rodman of Philadelphia, in a published clinic in 1901, makes the statement that he did not believe that an acute case could be saved by any known means of treatment.

Taking large series of cases the prognosis is about as follows: With an incubation period of one week or less and rapid development of trismus hardly any cases recover; with an incubation stage of less than 10 days and still a rapid development of trismus 5 per cent recover; with an incubation of between 10 and 20 days about 23 per cent recover; an incubation of over 20 days gives 50 per cent of recoveries.

The length of the incubation stage, however, by itself cannot be taken as a guide to the prognosis; quite as much consideration must be given to the rapidity with which the symptoms develop. Many cases are on record with a prolonged period of incubation, which have developed the symptoms in 24 to 48 hours and have gone on to a rapid death.

Moreover tetanus is by no means a rare disease, and at times it appears as an epidemic either in a locality, or a hospital, or in the practice of an individual; so that a consideration of it is well worth our attention. In the late census of 1900 there are recorded 2259 deaths, nearly half as many as resulted from appendicitis. In the same census Minnesota gave 36 deaths, and Minneapolis 6. During the past 12 years there have been 23 deaths in Minneapolis, 15 of which occurred during the past 3 years. It has been impossible to trace the recoveries, because they have not been published, but they have been few, as far as I could discover: One, years ago, under the care of several doctors; one (a mild one) under the care of Dr. J. W. Byrns; one at the city hospital under Drs. W. A. Hall and H. N. McDonald; and the one recorded in this paper—four in all.

In reviewing the published tabulated statistics one is struck, not alone by the great mortality, but possibly more forcibly by the almost absolute uniformity of the treatment adopted in practically every case. This was a great surprise to me, for my impression had been that the gamut of the pharmacopeia had been run in the search for a remedy. The treatment almost invariably has been morphine, chloral, and bromide, combined or separate, with a very occasional use of eserine, cannabis Indica, gelsemium and a few others. Of late years there has been added the efforts to supply to the tissues some antidotal substance, either antitanic serum, carbolic acid or emulsion of brain tissue. So far these efforts have failed of effect, the consensus of opinion being that they are of little curative value, notwithstanding the fact that several long statistical monographs have been published apparently showing that the mortality has been reduced to 45 per cent by the use of antitanic serum.

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*Read before the Hennepin County Medical Society, October 6, 1902.

For these reasons all cases ought to be reported, and especially those which recover, or at least those in which anything in the plan of treatment has been at all apparently instrumental in bringing about the favorable result.

Within the past year and a half two cases of tetanus have come under my care, both grave, one ending in death and one in recovery, the recovery in the second being apparently largely due to the treatment.

Case 1.—Robust boy of 5 years. On May 11, 1901, fell on end of brass rod, which perforated scrotum on right side. Without anesthesia the wound was explored and washed out with bichloride, but as subsequent events showed, a small piece of clothing was not removed. The wound suppurated and was dressed several times. On May 18th at 5 a. m., after an incubation period of 6½ days, the boy waked up and asked for something to eat, when it was discovered that he was unable to open his jaw. Thinking it was a tonsillitis I was not notified till afternoon. At that time he was pale, sitting up in chair, with rapid pulse and altered expression of face. Could open mouth enough to see throat, which was normal. A diagnosis of tetanus was made and at 6 p. m. under chloroform the wound was opened and thoroughly scraped. At this time 30 c. c. of antitetanic serum (Parke, Davis & Co.) were given subcutaneously; at 9 a. m. on the 19th 20 c. c. more, and a third dose of 20 c. c. at 8 p. m., making 70 c. c. in all in 26 hrs. The condition after this was so bad that no more was given. The other treatment consisted of chloral and bromide, 30 grs. of each every 3 hours, morphine and physostigmine hypodermatically, and chloroform. On the morning of the 19th opisthotonos was well marked and later chlonic spasms intervened, which were violent and frequent and caused extreme pain and required chloroform to control. The temperature went to 104° F., the pulse became more and more rapid and weak and he died in a severe convulsion from asphyxia at 2 p. m. on the 20th, 57 hours from the commencement of the attack. The points of interest in this case are the short incubation (6½ days), the acute development and rapid progress of the symptoms, the extreme weakness of the heart (140 per minute) and the absolute lack of benefit from any of the treatment. The chloral seemed to have so bad an effect on the heart's action that it was suspended on the 19th. The chloroform also weakened the heart very much but was continued to relieve the suffering. No autopsy and no cultures made from wound.

Case 2.—A well-developed girl 14 years of age. On February 20, and again on February 21, 1902, she was examined per vaginam by two different physicians in the country for the purpose of diagnosing the character of a rapidly-growing abdominal tumor. On February 23d she was reexamined by me and on the 24th by Drs. W. A. Hall and Dunn. On February 27th I removed a large ovarian cyst, the operation being simple and healing by first intention. The temperature never reached 100° F. and she sat up on the 10th day.

On March 12th, 13 days after the operation and 19 after the first vaginal examination, during the forenoon, she felt that her jaw was stiff but did not mention it to anyone, as she ascribed it to chewing gum and feared that this would be taken from her. During the evening of the same day she was suddenly seized by what was supposed to be severe hiccough; this was ascribed to gastric disturbance and was promptly relieved by a single hypodermic of 1-6 gr. of morphine. On the morning of the 13th she looked pale and her pulse was slightly increased, but she said she was feeling well and therefore was not closely observed. During the afternoon the spasms of the abdominal muscles returned and she was given codeina and subsequently morphine ¼ gr. and atropine, 1-100 gr., but without relief. During the night she slept but little on account of the pain and distress.

When seen on the morning of the 14th there was no question as to the nature of the disease. The jaws could not be separated more than one-half inch; risus sardonicus was marked; the chin could not be approximated to the sternum; the abdominal muscles were rigid and hard as a board, and every few minutes were thrown into clonic spasms, simulating hiccough. The extension to other muscles was rapid and by night the picture was classical of a grave case of tetanus. The head was drawn far back to the left and was rotated to the right, the back was arched, the left leg rigid with the ankle and toes held in extreme extension; the right leg in the same condition but less marked. At no time was there any rigidity of the upper extremities, this being rather characteristic in tetanus. Finally the throat muscles became involved, making swallowing almost impossible even for a spoonful of water, and rectal feeding had to be resorted to.

Added to the tonic contraction, every 5 to 10 minutes the muscles were thrown into clonic spasms, giving rise to horrible convulsions and during these she screamed with pain. The pain and the frequently repeated spasms interfered very much with the ability to sleep, which for 10 days did not exceed four hours in the 24, and that only in snatches of a few minutes at a time. The mind remained clear for the most part throughout the whole course, except that dulling occurred during the administration of chloral, and on several occasions during the night she was reported to have been delirious. The special senses became extremely irritable. Light was unbearable. The slightest noise produced great suffering and even a whisper or ordinary conversation 40 ft. away across the yard was complained of by her as a loud unbearable roar. Frequently the opening or closing of the door in the gentlest manner would bring on a series of clonic spasms. She complained bitterly of the pain in the tonically-contracted muscles, saying over and over that she would die if we did not give her relief. She slept with a rag in mouth to prevent biting tongue.

The clonic spasms continued for a long time, the last being on the 28th when a note recorded that she had four during the night, but lasting only a moment. Thus the period over which they extended was 16 days. The rigidity lasted still longer, the stiffness in the left leg being noted on the 29th, at which time also she was able to open the mouth only to the extent of one inch.

The temperature was moderately elevated throughout, never going above 102½° F., and reaching normal at the end of the second week.

The pulse-rate was moderately increased on the 12th, 13th and 14th, ranging between 80 and 100; on the 16th, however, it became very rapid and feeble and on the evening of this day death seemed very close. On the 20th and 21st again the pulse-rate reached to nearly 150.

The quantity of urine was very much diminished, averaging only 11 to 12 oz. in 24 hours for ten days, but there was no albumin or casts at any time. Sweating was profuse. Anemia was marked and there was considerable loss of flesh.

On April 6th (26 days after the onset of the disease), the patient left the hospital, and subsequently returned to a condition of perfect health.

In this case there were several points of interest, the main, however, centering around the plan of treatment.

1. Concerning the question as to the point of entrance of the infection, I think we may throw out the ovariotomy wound inasmuch as the same instruments, the same catgut and the same operating-room were used just before and just after with no other case occurring, rubber gloves being used by everyone concerned in the operation. My conviction is that infection took place through abrasions made in the hymen during the vaginal examinations on February 20th and 21st, the infection occurring either on these days or subsequently, prior to the operation on the 27th. No investigation, however, was made to determine this point as it seemed unwise to subject her to the added pain and danger. This would give an incubation period of not less than 13 nor more than 19 days, it probably being nearer the longer than the shorter period. This long period of incubation made the prognosis more favorable, the percentage of recoveries being 23 where the development of the symptoms is delayed beyond 10 days. On the other hand, however, I think we must consider this a case of grave type, inasmuch as the development of the symptoms was quite rapid. Within 48 hours (and probably within 36 hours) from the time the stiffness of the jaw was first noticed the symptoms were very decided; the trismus was complete, the abdomen rigid, opisthotonos already well-marked, and clonic spasms repeated every few minutes. So rapid was the progress that on the 4th and 5th days the prognosis seemed hopeless, death being threatened either from the exhaustion (the pulse running to 150 per minute and very feeble, with a very obtunded cerebrum) or from asphyxia during one of the frequently repeated convulsions.

2. Concerning the treatment. Morphine was absolutely necessary during the acute stage and was given freely enough to control the severity of the pain. One-fourth grain doses every 4 hours were necessary to keep her moderately comfortable, and yet these produced sleep either not at all or for from only 10 minutes up to one hour. 1-300 gr. of atropine was given with each hypodermic of morphine.

Antitetanic serum was employed as follows:—10 c. c. subcutaneously (Parke, Davis & Co.) on the 4th day; 40 c. c. on the 5th day; 30 c. c. on the 6th day; 30 c. c. on the 7th day; 20 c. c. on the 8th day—130 c. c. in all. No benefit whatever was apparent from its use.

Dram doses of bromidia, representing 15 grs. each of chloral and potassium bromide, were given every 4 hours for 48 hours, or 150 grs. of each in all. As in Case 1 the chloral and bromide had absolutely no effect whatever in abating either the tonic or clonic spasms, but did have apparently a very disastrous effect on the heart's action, for at the end of the 48 hours the pulse-rate was 150 per minute, very thin and weak. The breath was very foul and the cerebrum very much dulled, and this is the time we thought she was about to die. Thinking that possibly the desperate condition might be due to poisoning by chloral and inasmuch as it was doing no good, paraldetyte was substituted in 30 m. doses. This, although it did not control the spasms, was later continued in ʒi doses to help produce sleep. How much good it did is uncertain for at the same time the largest amount of morphine was being given.

Influenced by the action of veratrum viride in controlling puerperal convulsions, on this 5th day I decided to try it in this case, and at 8 p. m. started timidly with 1 minim doses hourly, but of course without benefit. Looking up its physiological action and dosage I found recorded in Foster's Therapeutics, a case of recovery from tetanus under the use of veratum viride and gelsemium. This had been reported by Dr. Fordyce Grinnell, of Pasadena, California, in the Medical News, July 18, 1896. The patient was a boy 6 years old; the period of incubation was 9 days; the symptoms fully developed within 48 hours; apparently a grave case. Since then I have looked up the literature of tetanus as thoroughly as was possible for me to do in a short time, but curiously have not been able to find a single other case in which veratrum was employed, but did find several cases in which gelsemium was used.

Therefore on the morning of the 17th I increased the veratrum (Norwood's tincture) to 4 and later to 8 m. and added 8 m. fl. ext. gelsemium, and these were given in combination every hour per rectum.

This combination controlled the spasms in a remarkable manner, so that by the evening of the same day a very wonderful change for the better had taken place. The clonic spasms became infrequent, but the tonic contractions continued. The pulse became fuller and slower and at times, when she was quiet, went down to 72 per minute. As she recovered from the stupefying effects of the chloral she became very noisy and restless. She also vomited a good deal.

On the 19th the vomiting became so persistent that the doses were reduced to 6 m. every 4 and then every five hours, and it was decided to return to chloral and bromide, 30 grs. of each per rectum every four hours. Eight doses were given, or ½ oz. of each in all. At the end of 24 hours the preceding bad conditions had recurred, and the record showed that the clonic spasms were again being repeated every few minutes, and that the pulse-rate was 144 per minute. The chloral and bromide were again stopped but the veratrum and gelsemium were not increased in frequency until the morning of the 22d and not in quantity till later on the same day. During the 23d and part of the 24th the veratrum was increased to 10 m. and the gelsemium to 8 m. every hour.

Again the improvement was marked and prompt, so that she slept nearly all of the night of the 23d and had no spasm after 10:30 p. m. During the 24th the dosage was reduced, still more on the 25th, and stopped on the morning of the 26th. During the 25th, 26th, and 27th she had a few slight spasms and four momentary ones on the 28th. There was some question, however, about these, as during these days she was begging for morphine which was being withdrawn.

In the 10 days about 17 drams each of Norwood's tincture and fl. ext. of gelsemium were given per rectum with no effect on the cerebrum and no depressing effect on the system, this being in marked contrast to the action of the chloral.

In order to intelligently appreciate the bearing of the treatment employed in these cases upon the results obtained it will be necessary to consider the pathogenesis of tetanus and also the physiological action of the drugs employed. (The facts concerning tetanus have been obtained largely from the exhaustive article by Bubes in the 20th Century Practice of Medicine and from the excellent monograph by Moschcowitz in Vol. 32 of the Annals of Surgery. The physiological action of the different drugs has been taken from various works on therapeutics.)

Tetanus is undoubtedly an infectious disease due to the action upon the system of the toxins elaborated by the tetanus bacillus of Nicolaier. The so-called idiopathic cases are simply those in which the point of inoculation has not been discovered The bacilli having gained entrance to the organism through some wound, large or small, remain at the point of inoculation and do not pervade the system. At this point they elaborate their toxins, and it is the toxins which produce the symptom-complex which we know as tetanus. Further it has been experimentally ascertained that the bacilli die in 10 hours when subjected to the action of normal tissues, but that they continue to live and produce their toxins in a suppurating focus. These two facts have an important bearing on the prophylaxis and treatment and teach the great importance of thoroughly cleansing contaminated wounds and making them as nearly aseptic as possible, in order to stop the continued production of the poison.

The clinical fact that cases of tetanus which recover return to a condition of absolute health and show no more results of having passed through so severe an illness than does one who recovers from, say, poisoning by strychnine, would seem to prove the assertion that the toxins are similar to the alkaloidal poisons which, when they do not kill, are eliminated and leave no trace; in other words that tetanus is a self-limited disease, elimination being complete in 2 or 3 or 4 weeks. This fact also is important as bearing on the question of treatment, for whenever a drug or other method of treatment is discovered the physiological action of which is exactly antidotal to that of the tetanus toxin and is not itself noxious to the human system, so that its influence may be continually maintained until the tetanus toxins are eliminated, then such drug or method will be found to be a specific against tetanus, just as morphine and atropine are specific against each other's poisoning.

Pathology.—With the newer methods of staining nerve, tissue, constant changes have been found in the motor cells of the anterior spinal horns of persons dying of tetanus, and these changes may be accepted as characteristic of this disease. They are chromotolysis, swelling and dislocation of the nucleolus, degeneration of the axis-cylinder process and increasing homogeneity of the basement substance. Further, it has been demonstrated by Roux and Borrel that the toxins are firmly fixed in these cells, so that it is improbable that they are capable of neutralization by any antitoxin or chemical substance. This fact explains possibly why so little success has resulted from the use of the antitetanic serum.

Pathogenesis.—Moreover, in considering the pathogenesis of the disease, it has been found that the tetanic spasms have their origin in the anterior horns of the spinal cord, for experimentation has shown that they do not arise primarily either in the brain, muscles, sensory or motor nerves.

In experimental tetanus the tetanic contractions invariably appear first in the muscles contiguous to the inoculation point, giving rise to what is called "local tetanus." From here they spread transversely, i. e., to the other side of the body, and then up and down, and finally become general. In human tetanus, however, trismus is the first symptom usually observed, and Stintzing says that local tetanus is never found in human subjects. Moschcowitz, on the other hand, claims that it is common probably, but is overlooked because we do not see the cases sufficiently early. It was marked in the case reported by him and also in one reported by Abbe (Vol. 32, Annals of Surgery). In some experimental cases local tetanus constituted the whole disease, there being no extension beyond the inoculated region.

The explanation of these facts is as follows: The toxins are generated only very slowly at the point of inoculation; they are then carried along the peri- and endoneurion of the nearest nerves to the spinal cord and there instilled, drop by drop, as it were. Here, because of the specific affinity of the cells for these toxins, they are taken up by the nearest cells of the anterior horns, which are those of the segment belonging to the inoculated region and so give rise to "local" tetanus. If now there is only enough toxin to saturate these cells the process remains local. If, however, there is a surplus, the cells of the opposite horn become infected and later the segments above and below, until finally there eventuates general tetanus. In man this spread is very rapid because of the large size of the subarachnoid space (Stintzing).

The effect of the toxins upon the spinal motor cells is to produce in them a condition of hyperexcitability, so that they react to the slightest stimuli, thus giving rise to continuous tonic and clonic contractions. During sleep, the stimuli being absent, the muscles relax. (This is not strictly true.)

THERAPY.—The aim of treatment must be directed either

1. Towards neutralizing the toxins, rendering them inert, or

2. Towards exerting a counteracting depressant effect upon the motor cells of the anterior horns, thereby neutralizing or overcoming the hyper-excitability produced by the toxins, and maintaining this depressant action until the toxins are eliminated. The first of these methods constitutes the more recent therapy, and consists of the injection (subcutaneous or intracerebral) of antitetanic serum, or of emulsion of nervous tissue, or of some chemical, principally carbolic acid.

From a study of the published statistics of cases treated by antitetanic serum it appears to me that the results fail to show any marked benefit, and this, I think, is the consensus of opinion. It is true that the claim is made that the mortality has been reduced from 90 per cent to 45 per cent, but apparently in these statistics are many cases of mild and chronic type, and indeed not a few where the question of diagnosis would arise. The reported acute and grave cases die just as before. The claim made that the earlier in the disease the use of the antitoxin is begun the more efficient it will be is apparently contradicted by an analysis of the cases, for where the antitoxin is given early the mortality is high and where given late the mortality is low. Thus in the first 53 cases of the statistics of Moschcowitz the injections were begun on the first day in seven cases with only one recovery, while in eight cases where the injections were commenced only after the tenth day all of them recovered. Now of course this does not show that the antitoxin adds to the danger but only that in mild cases recovery is common and that after a case has run ten days it is most likely to get well under any treatment and that the anti-toxin had nothing to do with it. Prophylaxis against tetanus by antitoxin is a different proposition and apparently is efficient.

Carbolic acid, in the strength in which it must necessarily meet the toxins in the body, likewise cannot possibly be efficient, and whatever curative effect it may have exerted in the reported cases must have been due to its physiological action as a spinal depressant.

In the light of the pathology of the disease any supposed effect from the emulsion of nerve tissue must be fanciful.

So, for the present at least, I think we must still consider as most efficient that plan of treatment which aims to counteract the state of hyperexcitability into which the nerve cells are thrown, holding this in abeyance until the toxins are eliminated. With this, elimination must be favored and nutrition maintained. If, as is highly probable from the histological findings, this hyperexcitation of the cells has a physical basis, of course a certain number of cases may be conceived as beyond any help whatsoever, for the reason that the changes in the neurons have gone beyond a point compatible with living. What percentage of cases is thus beyond hope before the disease is clinically recognizable we do not know. We only know that in the past and still in the present the mortality is excessive. It is to be hoped that the future may hold out more promise.

The only means (and really the most rational) which we have, at present, to oppose the action of the tetanus toxins is the administration of those drugs which exert a depressant effect on the motor cells of the spinal cord. Of these the most efficient, in order, are about as follows: Chloroform, veratrum viride, gelsemium, paraldehyde, chloral, bromide of potash; but, as I said early in this paper, the most popular are chloral and bromide of potash.

I. CHLOROFORM is certainly most powerful in relaxing spasm and would be a most efficient treatment for tetanus were it not for its paralyzing effect on the heart muscle. If used for long periods or continuously it is sure to shorten the life of patients suffering from tetanus, and therefore is not good treatment.

II. Chloral.—The physiological action of chloral is markedly to depress the activity of the brain, in large doses to depress the spinal centers, and lastly to weaken the heart's action. Its effects are very similar to those of chloroform. It is a powerful drug and a single dose of 30 grs. has more than once caused death. Yet in tetanus large and repeated doses are necessary, and are advised in every paper and in every text-book to which I have had access. Some authors recommend increasing the dosage recklessly if the smaller produces no effect, giving as excuse the urgent necessity of the conditions, while others advise more or less caution. If the case recovers (which is seldom) the drug is given the credit, while if it dies the disease is blamed. And yet in the acute grave cases none apparently get well under it, and it is extremely common to read in the reported statistics such remarks as this, "Notwithstanding that the chloral and bromide were pushed to the limit the convulsions continued unabated and with increasing frequency and the patient went on and died." If it could be shown to have done even a small amount of good, such reckless use of a dangerous drug in a dangerous disease might have justification, but careful study of the published statistics cannot be tortured into giving such justification. We go on giving chloral because someone else has given it and because the books say to give it; and the books say to give it because some preceding books said to give it, and in the future new books will recommend it because the books of to-day have recommended it, and it will always be ordered given in maximum and ever-increasing dosage. There is no doubt in my mind, from my research and from my personal experience, that a no small number of cases of tetanus have ended fatally, not from the disease itself but from the toxic action of the chloral used.

III. Potassium Bromide.—The action of bromide of potash upon the nervous system is exerted first upon the sensory nerves, lessening reflex irritability and only late affects the spinal motor centers. Moreover its action is slow and requires the continuous administration of full doses for several days to produce its effects decidedly (Foster). For this reason this drug can hardly be expected to be of much value in an acute case of tetanus which may kill in 24 hours and most often does within three days. And yet H. C. Wood publishes, in his book, statistics of 34 cases with 30 recoveries under the use of bromide—a most wonderful and marvelous result!

IV. Paraldehyde.—The action of paraldehyde upon the nervous system is very similar to that of chloral with the important difference that its action on the heart is much less injurious. It, however, is much less popular in the treatment of tetanus, although cures have been reported from the use of 150 grains per diem.

V. Veratrum Viride.—The action of veratrum viride upon the nervous system is to directly depress the spinal motor centers alone. It has no action at all on the sensory centers, nor on the cerebral centers, nor on the sensory or motor nerve trunks (Dispensatory). It depresses the heart's action and slows it to a marked degree; yet, because of the free vomiting, dangerous symptoms scarcely ever occur and I have not been able to find a death recorded from its use. Hare considers it the safest depressant we have.

As I have previously said I have only been able to find one case of tetanus treated by this drug, and that in combination with gelsemium, and to me this is curious, both because of its pronounced and well-known physiological action and because of its deserved popularity in the treatment of puerperal convulsions. Its action in the case recorded in this paper was certainly promptly beneficial and, to my mind, curative, and the proof of this apparently made more positive by its effect in overcoming the relapse which occurred on the ninth day.

VI. Gelsemium.—The action of gelsemium on the nervous system is a direct depressant effect on both the motor and sensory areas of the spinal cord, causing profound muscular relaxation and diminished reflex irritability. Its action is prompt (in ½ hour), and it is not especially depressant to the heart except in large doses. It has been used more or less in tetanus and the effects have been fairly good.

VII. Physostigma also paralyzes the motor areas of the cord and has been employed in tetanus, but in acute cases with very little benefit. In my fatal case it was substituted for the chloral but had no appreciable effect in reducing the spasms either in frequency or in violence.

Many other plans of treatment have been used with more or less benefit, depending on the character of the individual case, but it would be impossible to mention them, as this paper has already far exceeded its intended limits.

In conclusion I desire to state that, in presenting this subject to the Society, I had in mind the following points, which I wish to emphasize:

1. To put on record a recovery from a severe and grave case of tetanus, under the administration of drugs, the ascertained physiological action of which is directly antagonistic to the action of the tetanus toxins, both poison and antidote affecting in opposite ways the same structures, viz., the anterior horns of the spinal cord. Further that to this extent the treatment was not empirical.

2. To call attention to the fact that chloral is a dangerous drug, which is even more liable to exert its poisonous effects when given during the course of so fatal a disease than when given in health; and to protest against its reckless and continuous use in cases of tetanus, even after it is plainly evident that it is doing no good.

3. To record the opinion, based on observation, that some of the deaths ascribed to the tetanus poison have really been due to the effects of the remedies used.

A CASE OF RENAL TUBERCULOSIS

By Geo. Douglas Head, M. D.,

Professor of Microscopy and Clinical Medicine, University of Minnesota

MINNEAPOLIS

There are three rather common symptom-types to be observed in cases of renal tuberculosis.

In one class of cases the chief symptom of which the patients complain, is frequent urination, accompanied by pain in the region of the bladder. Into this group falls the largest number of cases. They suggest cystitis to the clinician; and the presence of pus in the urine adds to the reality of the picture.

In a second class of cases, chills, fever, and sweats play the chief role in the symptomatology. These cases suggest some septic infection, or, if the paroxysms come with regularity, malarial fever.

In a third group of cases the symptoms observed are slight fever, loss of strength and weight, and sometimes pain in the lumbar region. All of these symptoms usually come on insidiously, and the diagnosis is made late in the course of the disease or at the post-mortem table. A study of the clinical symptoms alone usually only suggests the diagnosis of renal tuberculosis. To establish it antemortem, one must find the tubercle-bacilli in the urine, or he must reproduce the disease in guinea-pigs, or other susceptible animals, by intraperitoneal inoculations of the urine sediment. The following case illustrates the value of these procedures in the diagnosis of this disease:

On April 6, 1900, Miss C——, 18 years of age and fairly well nourished, sought relief for frequent micturition and attacks of pain in the right lumbar region. Her father died at the age of 65 of stone in the bladder, and one sister died of acute pulmonary tuberculosis at 20 years. The patient was well until one year ago, when she began to have pain in the right lumbar region, which was dull in character, with occasional sharper attacks lasting half an hour or more. The pain was not continuous, and never severe enough to send her to bed. Six months or so after the lumbar pain began, she commenced to experience a dull pain over the lower abdomen in the region of the bladder, and passed her urine frequently. A month ago she noticed that her urine was cloudy, and had a bad odor. Now she passes water two or three times in the night, and five or six times during the day. At the close of urination she often feels a painful sensation in the region of the bladder. She has had no chills or sweats, nor does she think she has fever. She has lost a few pounds in weight in the last year.

On examination one notes a young woman of rather slender build and anemic look. Her temperature is 102°, and her pulse 90. Nothing suggestive is noted until the abdomen is reached, when a kidney-shaped body, apparently larger than normal and tender to touch, can be felt in the right upper quadrant of the abdomen. Its surface seems irregular, and it slips up under the ribs on bimanual palpation. The lungs are negative. The leucocyte count is 8500 per c. m. m. A specimen of urine passed at the office was milky in color, acid in reaction, sp. gr. 1014, and contained some albumin, but no sugar. On microscopical examination this urine showed large numbers of pus cells with nuclei well seen, a few squamous epithelial cells, a few washed-out blood cells, and a few large spindle and branched cells of a peculiar type.

During April the patient was seen several times. She always had fever ranging from 99° to 101°, and complained of feeling chilly. Her most constant and annoying symptoms were frequent urination, and pain in the right lumbar region. At every examination a rounded mass could be felt in the right upper abdomen, which was tender to the touch, and slipped up under the ribs on bimanual palpation. It did not fluctuate, and felt like an enlarged kidney. Every examination of the urine showed many pus cells, a few washed-out red-blood corpuscles, and a few long spindle or branched cells, as mentioned above. The urine ranged from 1014 to 1018 in sp. gr., was always acid, and on one occasion contained a few hyaline casts.

On April 10th the urine was stained for tubercle-bacilli, and large numbers of bacilli staining like tubercle-bacilli, were found. To determine whether these bacilli were tubercle or smegma bacilli a guinea-pig was inoculated intraperitoneally on April 23d with 2 c. c. of the centrifugalized urinary sediment. This guinea-pig died July 5th, and at the autopsy tubercular lesions were found at the site of the injection, and in the peritoneum, substernal glands, lungs, liver, and spleen. In some of these lesions tubercle-bacilli were demonstrated.

From April to August, 1900, the patient continued in the same condition. The frequent urination was controlled best by bladder irrigations. A slow but gradual increase in the size of the right kidney could be noted from time to time, and frequent examinations of the urine always revealed the presence of tubercle-bacilli, sometimes in large masses and again singly. After the death of the guinea-pig, in July, the diagnosis of renal tuberculosis was made, and nephrectomy advised. This was refused.

From August to December the patient was in the hands of an Osteopath. For the first month she gained in weight, but later lost ground rapidly. Now, December 25th, she has daily chills lasting half an hour or more. These are followed by high fever, 104°-105.5°, with rapid pulse, 140. The fever is followed by a profuse sweat. The chills, fever, and sweats come daily, usually in the afternoon, but at no regular hour. She passes her urine every half hour, night and day, and complains of much pain when the urine is voided. The patient has lost much in strength and weight, and is bed-ridden.

During January, February, and March she lost ground rapidly. Nearly every day she experienced a violent chill, followed by high fever and profuse sweats. During these months the patient had a number of severe attacks of dyspnea. They usually came on in the evening or afternoon, lasted about five minutes, and were relieved by propping her up in bed, and giving cardiac stimulants. The pulse was rapid, but not irregular, in these paroxysms. The urine contained no casts, although the attacks seemed uremic in character.

The patient died April 6, 1901, just one year after coming under observation, and two years after the onset of symptoms.

The case is of interest, first, because it exhibits at different stages two of the symptom-types of the disease, frequent urination and lumbar pain in the beginning, and chills, fever, and sweats near the close; and, secondly, because it demonstrates the value in diagnosis of a bacteriological study of the urine sediment.

THE USE OF FORMALDEHYDE IN DIPHTHERIA*

By C. A. Donaldson, M. D.

MINNEAPOLIS

Most physicians use antitoxin, and their confidence in its virtue is so great that it monopolizes the literature of diphtheria therapeutics. Other treatment is considered of secondary importance. This is voiced in Christopher's quotation of Biernacki in his "Pediatrics" (p. 76) as follows: "If antitoxin could always be given in adequate doses before the specific poison had initiated cardiac degeneration, there is weighty reason for believing that further treatment would be of very minor importance." Yet antitoxin has little if any influence on the life or activity of the mischief-producing germ, the Klebs-Loeffler bacillus.

These bacilli take up their residence in the mucous membrane of the throat or nose, set up an inflammation which proceeds to necrosis and the formation of the pseudomembrane. Within this cover they produce the ptomaines or toxines which, being absorbed by the lymphatics and blood-vessels, produce the constitutional symptoms.

The early use of antitoxin neutralizes the effects of these ptomaines, improves the general symptoms, lessens the local inflammation, and soon causes the membrane to disappear. But during this entire period, and often extending far beyond it, we can demonstrate the presence of these bacilli, which remain a possible danger to the patient, and a certain menace to the family and others.

What are we going to do about it? Leave it alone is the conclusion of those who consider their duty done when antitoxin has been given. That many cases show these germs present for weeks and months is a common experience. Several of my cases, whose constitutional symptoms were of short duration, showed the germs present during a period of from seven to ten weeks. Cases are reported lasting six months, and Osler quotes a case, reported by Golay, in which the bacilli were found for 362 days, and had during this period three acute relapses. If we can kill these germs, we save a repetition of such cases, save needless exposure to others, and avoid unnecessary time of quarantine. Some attempt to do this has been made in the use of local remedies, such as Loeffler's solution, corrosive sublimate, carbolic acid, etc. As to the results I find only generalized data.

Park, in Hare's "System," reports over 2,000 cases. About 40 per cent of them showed the bacilli present six days or less from the inception of the attack, with smaller percentages up to 90 days. He reports that in each case examined, the virulence remained irrespective of time. As these cases were tested probably for diagnosis only, no effort was made to get the shortest time present. The time elapsing from the last smear showing the bacilli present to the smear showing no bacilli averaged about 8 days. For convenience these will be designated, respectively, positive and negative. This gives 14 to 15 days as the longest period for this 40 per cent of cases to reach the negative smear. We may safely conclude that in possibly 20 per cent of the cases the bacilli remained only 9 or 10 days. In the present issue of the Reference Handbook he again reports 600 cases showing that in 50 per cent of them the bacilli disappeared three days after the disappearance of the membrane. The same article gives the time of the pseudomembrane present as from one to two weeks. These reports give no information as to the use of local germicides. If the bacilli can be destroyed only one day sooner it is worth our effort. The possibility of preventing their continued presence for some months is so important that it deserves our most serious consideration. The local germicides referred to, as commonly used, affect only the mucous surfaces. The patient's hair, clothing, bedding, and room are infected, and it seems improbable that even with exceptional cleanliness we may expect to find these things free from this germ.

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*Read before the Hennepin County Medical Society, November 3, 1902.

We come now to the use of formaldehyde, recognized as a disinfectant without a peer. It is used, I believe, exclusively by our Board of Health for that purpose. It is a colorless gas of very pungent odor. It is very irritating to the mucous membranes, and causes almost immediately a free flow of tears, sneezing, and spasmodic cough. These results are of short duration if the exposure is not continued. Tolerance is quickly established in many cases, especially if a small quantity of gas is allowed to enter the room at first. Sometimes nausea is produced, and one case complained of severe headache. While persons in health can remain in the room for some time during the fumigation, without unfavorable results, as is frequently done by the Board of Health inspectors, it is well to remember that it is possible for the irritation from the gas to cause edema of the larynx. Exposure of the liquid formalin (a 40 per cent solution of formaldehyde) sprinkled on a suspended sheet, does not seem to give satisfactory results. I have used two preparations of solidified formaldehyde. The tablets or pastilles (Taylor) require fifty to each 1,000 cubic feet of space. These are placed in a pan over an alcohol lamp, and are covered by a screen. The other is the Lister candle, ready to light and consequently more simple for families to use; however, it has sometimes disappointed me, and does not seem to be so stable as the tablets.

I have used two methods of fumigation. The first is to remove the patient to another room while room No. 1 is fumigated, then return the patient. Room No. 2 is then fumigated, and the patient is placed alternately in these two rooms. The second method consists in burning either tablets or candles in a closet which has a door opening into the patient's room, allowing the door to be opened for a short time to permit the escape of the gas into the room. Plan No. 1 seemed to give the best results, and it is, I believe, the safest for the patient. From one to three hours after fumigation, patients who have become accustomed to the gas, can be placed in the fumigated room. One room can be used during the day, and the other at night. As it is often impossible to secure the two rooms, the closet offers the next best plan. Park advises the following as a spray: Formalin ʒj, glycerin ʒij, aquæ q. s., add ℥iv to ℥vi, although he does not expect it to penetrate the membrane. Some claim is made that glycerin lessens the irritation of formaldehyde. The record of these seven cases appears in the following table:

	Age	Date of Beginning	Character of Attack	Number of positive smears	Formaldehyde used	Date of negative smear	Total Days to negative smear	Days Quarantined
I C. D	4	2-19	Mild	4	Tablets	2-26	7	8
II Jno. T.. ...	Adult	2-16	Ordinary	3	Liquid	3-6	18	20
III Chas. H...	Adult	3-9	Ordinary	1	Tablets	3-14	5	8
IV Mrs. P.....	Adult	4-12	Ordinary	2	Tablets	4-24	12	14
V D. M.......	12	6-13	Ordinary	1	Candles	6-18	5	8
VI L. N.......	14	6-21	Ordinary	1	Candles	6-26	5	8
VII J. C.	Adult	6-18	Mild	2	Candles	6-28	10	12
			Average,	-	-	-	9	11

Cases designated ordinary showed the membrane on more than one tonsil, and had marked constitutional symptoms. Case No. VII did not have antitoxin. All others received each one injection of 1,500 units given within 24 hours of the inception of the disease, except case No. II. His injection was given at the end of 48 hours. During the 48 hours or more from the negative smear taken by myself, to the negative smear taken by the Board of Health, no formaldehyde was used. Case No. II had suppurating tonsillitis, and did not begin the use of formaldehyde for 10 days. Case No. III is worthy of special mention. His constitutional symptoms were the most marked of the seven. During the first 48 hours he was unable to sit up in bed for even a few minutes. He was, however, the most faithful and diligent in his use of the formaldehyde.

I have omitted from this report all cases diagnosed clinically where no bacilli were found. Cases which could not be isolated from subsequent cases are not included. I discovered that so long as these cases were confined to the same room with another case, the germs appeared in each smear. The cases reported constitute more than 50 per cent of my completed cases, during the period since I began the use of formaldehyde.

These few cases are reported not for the purpose of making any definite conclusions, but were deemed of sufficient importance to report, with the hope that the further investigation of this remedy will show that it has a most important place in our treatment of this disease.

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FRUITS VERSUS DRUGS

It is well known that an overdose of early fruit in a young subject is a frequent source of intestinal disaster, while in moderate quantity, judiciously administered, fruit will do the work of many drugs. The old-fashioned remedy for summer diarrhea is blackberry brandy or cordial. This practice still exists among the laity, but among medical men castor oil or calomel is more reliable, as they carry away the cause of the diarrhea. The blackberry preparation is an astringent rather than eliminative, and if used for diarrheal diseases much harm may come from its use in the first stages.

Among the diseases or symptoms, blackberry wine is supposed to relieve colic, presumably from flatulence, and by some it is considered a specific if powdered cinnamon is added for the chills of malaria.

Some one has suggested that if one would eat a grape a minute for one hour, and repeat this performance three or four times a day, eating with it a little dry bread, the thin, nervous, anemic patient, whose digestion is out of order from overwork and worry, would work wonders. So it would. The digestion would be at rest, the patient pleasantly and persistently occupied, his nerves quieted by the simple and monotonous method, and his apparatus gently lubricated by a palatable fruit.

Apples are considered an excellent purifier for the blood, a gentle laxative, nutritious, and fattening, and will quench the desire of the alcoholic.

The pineapple contains a digestive aid which has been seized upon by the proprietary chemist, and urged upon the public. The juices contain an acid which is strong enough to digest the membranes formed by tonsillitis and diphtheria, and, with antitoxin, would form an agreeable combination for the physician who does not care to overload the patient with drugs.

The juice of the lemon has long been a favorite in febrile states, inactive liver, and certain forms of rheumatism. It is given in the form of hot lemonade to avert a cold, to shorten fever states, and to assist elimination.

Physicians are urging gouty people to eschew all kinds of sweets, and to substitute walnuts. The pain diminishes and the swelling disappears.

Each form of fruit has its specific form of disease according to the composition of each, yet it is well to have a definite idea of the disease before the remedy is employed. The chief value of fruits is the acids they contain, the diminished supply of other foods, their digestibility, and the rest accorded to the digestive organs.

In some cases fruits are prohibited on account of their overripe state, as well as because of the possibility of adding fuel to the furors of fermentation. In countries where fruits can be gathered and eaten fresh, their efficacy is increased, but when fruits are transported long distances before the natural ripening process has begun, then placed in badly ventilated rooms, and ripened by heat from gas-lights, they may undergo such decomposition as to unfit them for therapeutic purposes.

On general grounds fruits are better than many drugs, but must be selected with the same attention to details to be of service, otherwise cooked fruits are safer than those artificially ripened.

HOSPITAL CLINICS

Attention is called to the clinic from St. Barnabas Hospital reported in the last issue of the Lancet. The editor requests like reports from other hospitals. The attending physician or surgeon may not care to give much time to such work, but if he will instruct his interne to keep a careful record of his cases and urge the nurse in charge to faithfully and intelligently record her observations on the clinical chart, it will be the work of but a few moments to put the whole record in good clinical form for publication.

Many interesting cases and methods may in this way be preserved and published, and will be creditable to the doctor, educational for the interne, and profitable for the nurse.

THE BLOODLESS METHOD

A short time ago the Minneapolis Tribune announced in large type the first Lorenz operation ever performed in the Northwest. The whole account was a brilliant bit of advertising that does not reflect credit on the operator. Of course the newspaper claims the scoop, and the surgeon protests his innocence—the same story too oft repeated.

Surgeons in both cities had performed the operation long before the account of it appeared in the recent issue of the daily press. The Pioneer Press resented the Minneapolis article at once, and told of numerous operations performed by the surgeons in the city of St. Paul.

The public have been led to believe that the operation has first been introduced in this country by Dr. Lorenz, and their belief has been strengthened by the tremendous clinics that have been brought before Lorenz by the physicians of the various cities he has visited. Then, too, the physicians from the surrounding towns have crowded his clinics to such an extent that many could not gain admission.

Lorenz has many pupils in this country, surgeons who have studied in his clinics in Vienna, and who either wish to renew their acquaintance with him or refresh themselves in the steps of the operation. This does not prove, however, that the operation has not been done before in the Northwest. If the surgeons who have treated congenital dislocation of the hip by the Lorenz method would report their efforts, whether successes or failures, the numbers would be surprising.

Operations of this kind should be reported through the proper channels, the medical press. This will insure recognition of competent and skillful operators, and will lead to no errors or irregularities.

The visit of Lorenz to this country will give a tremendous stimulus to the bloodless operation, which, in the hands of experienced men, will do much for the unfortunately deformed.

THE ACCIDENT AT ROCHESTER

The death of a patient at the Rochester State Hospital from the efforts of the nurses to restrain him during a paroxysm of excitement, has caused a good deal of unrest among the friends and relatives of patients in the State hospitals. The daily press has faithfully recorded the inquest and inquiry and the findings of the coroner's jury.

The superintendent and nurses have been exonerated from blame, and the case has been dismissed from the public mind.

The general impression which seizes upon the outsider is one of discomfort, as many are more than willing to believe that cruelty and abuse are the rule in the treatment of the insane. It is hard for the friends of the patient to understand the necessity for restraint during a period of excitement. No one can fully appreciate the fury and strength of a patient during a maniacal outburst unless he has been brought into close contact with it. A strong man under the influence of a delusion or the bewilderment of a confused mind, is seemingly endowed with the power of a Samson, and can easily brush aside four or five ordinary men. At such a time when an effort is being made to control a furious man some one is apt to suffer from accidental injuries that, in the excitement of the moment, cannot be accurately described. Such was the case at Rochester. The man had been confined in the county jail in St. Paul two or three days before his commitment to the hospital, and while there was maniacal and resistful. The same outbursts occurred at Rochester, and during a struggle he received injuries which hastened his death.

No one should be blamed for the accident, for it was not intentional, and the nurses were in duty bound to restrain such a case before he did injury to other patients.

Physicians who advise friends to send their insane to the State hospital for treatment will be met with reproaches for some time.

It is the duty of every physician to explain the situation fully, in order that all may understand. They must explain to the public that there is no mechanical restraint used in either of our State hospitals, that trained nurses are in constant attendance, and that they are the only means of controlling the violently insane; that occasionally it requires the skilled effort of many to control one patient until the paroxysm is over; that accidents sometimes occur under such distressing circumstances, but occur more often outside of a hospital where patients are restrained at home or in the county jails where untrained watchers are employed.

It would be wiser if the daily press published all the facts, but not in large scare-head type, for many of the people have friends in the institutions, and a florid publication creates resentment, and fosters the idea of persistent and continuous abuse among the insane, whereas the patients are humanely and kindly treated, and if by chance a nurse is incompetent or in the least abusive or uncivil he is promptly discharged. As a matter of fact the insane are more kindly treated in our State hospitals than in private homes under unskilled care.

The investigation at Rochester was prompt and thorough, and the verdict rendered in accordance with the facts.

REPORTS OF SOCIETIES

THE MINNEAPOLIS PATHOLOGICAL SOCIETY

A. T. Mann, M. D., Secretary

The regular meeting of the Society was held Monday evening, October 20, 1902, at the University Laboratory, the president, Dr. L. B. Wilson, in the chair.

Dr. L. B. Wilson, assisted by Dr. Wm. M. Chowning, gave numerous demonstrations of the hematozoön of the so-called "Spotted Fever" of the Rocky Mountains. Before proceeding to the demonstration Dr. Wilson gave an outline of the disease and of his experiences in investigating its cause. Dr. Wilson was sent to study the epidemic by the Minnesota State Board of Health at the request of the Montana State Board of Health.

The disease has been known in the Bitter Root Valley of Montana about nineteen years, and there is a small district in Idaho where cases occur. The disease is closely limited. No case has ever been known to originate in Montana outside of the western strip of the Bitter Root Valley, four to ten miles wide by ninety miles long, except seven cases, which originated in an area about half a mile wide and two miles long in the narrow canon of Rock Creek, about 20 miles east of the Bitter Root Valley. Here there have been seven cases with seven deaths.

The disease has been known in the Idaho district about 30 years. Here most of the cases have been of a mild type. In the Bitter Root Valley, in Montana, since its first appearance, about nineteen years ago, probably 200 cases of the severe type have occurred, and 70 to 80 per cent of these have been fatal. No case has been known among the Indians. There are rumors of cases in Alaska, but none authenticated. The old edition of Hare's Therapeutics has an article by a Mexican physician on typhus fever in which the description would fit very well that of spotted fever as Dr. Wilson has seen it, so we infer the disease may occur in mountainous regions in other parts of the world.

The disease is sharply limited in its season. The earliest recorded case began March 17, and the latest about July 20, though most cases occur between May 15 and June 15. Sex, age and previous health of the patient seem to have no influence on the occurrence of the disease. There is probably a mild and a severe type of the disease, though most physicians have recognized but one type—the severe form with its "spots," by which they make the diagnosis. There is much difficulty in the accurate diagnosis of the mild type in which there are no spots.

As to symptoms: many cases have a short period of malaise, with pains in the bones, muscles, back, and joints. Then comes a well-marked chill. The chill recurs at irregular intervals, though with decreasing severity. A bronchial cough is usually present; a fever urine; and tongue, mouth and face take on a typhoidal appearance. The temperature rises rapidly after the initial chill, and may reach 103° to 104° F. on the second day. It gradually reaches its maximum in from five to seven days when it may be 105° to 107° F. It shows a slight evening rise, and morning remission as a rule. The temperature may become subnormal before death. The pulse is rapid, and may be out of proportion to the fever. Recovery is usually by lysis, as in typhoid. Improvement begins about the end of the second week, and the temperature reaches normal about two weeks later. In severe cases more or less edema of the face and extremities is present. This may be marked, and may appear as early as the third day of the disease.

The eruption usually begins two to five days after the chill, and first about the wrist and ankles or on the back. It extends over the entire body, but appears last on the abdomen. The scalp, palms, and soles are frequently covered with the rash. The macules at first are rose-colored, circular, from small pin-head to split-pea in size, and disappear on pressure, but quickly reappear, and are sometimes tender. The appearance usually changes rapidly. The macules become dark-blue or purple, are permanent, increase in size, and become confluent and more or less irregular. In some cases, however, the eruption remains small and discrete. The skin ordinarily shows some jaundice. The spots fade as the fever subsides, but may not entirely disappear for weeks or months after convalescence begins.

Desquamation begins about the third week, and extends over the entire body, but is slight, except over the areas of the eruption. In some cases the skin becomes gangrenous over considerable areas, e. g., on the fingers, toes, lobes of the ears, the scrotum, etc.

The blood shows a leucocytosis of 12,000 to 13,000; the red corpuscles 4,100,000 to 4,600,000; and hemoglobin 50 to 60 per cent in the cases examined. The Widal reaction for typhoid fever is not present. Freshly drawn blood shows the parasite sparingly in the red-blood cells.

As to the digestive tract: nausea and vomiting develop about the beginning of the second week, and continue in fatal cases to the end. The kidneys give a fever urine. The respiration runs up to 36, sometimes to 60, per minute, and, like the pulse-rate, is frequently out of all proportion to the temperature.

Prognosis.—In Idaho, where the "mild type" prevails, the mortality is only about 2 per cent. In Montana the cases which were marked by the eruption have had a mortality of 70 to 80 per cent.

Morbid Anatomy.—Six autopsies were made by Drs. Wilson and Chowning in from three to twenty-four hours after death. The gross lesions were very uniform throughout the series. Intense rigor mortis appeared early. The skin over all dependent portions of the body presented a marbled appearance; over other portions it was covered with petechial rash. In all cases small wounds of the skin due to wood-tick bites, were present. Pleura was normal. The lungs showed hypostatic congestion. The pericardium was normal. The epicardium usually showed a few petechial hemorrhages near the base of the left ventricle. The myocardium was softened. The endocardium showed no lesions. The right ventricle was filled with dark, fluid blood, and the left was almost empty or contained only a small clot.

The spleen was enlarged, and was from two to three and one-half times the normal weight; the capsule, distended and thin. On section, the spleen was dark red, and so soft that it was in most cases diffluent. The malpighian outlines were obliterated. The omentum over the spleen was usually congested. The dependent walls of the stomach in some instances were hyperemic. The intestines were generally normal, slight congestion being present in two cases. The liver was slightly enlarged, pale, and of normal consistence. In all cases one or both kidneys showed small hemorrhages under the capsule on the ventral surface. The capsules stripped readily. The cortex section was congested. The meninges of brain and cord showed a slight congestion, apparently hypostatic.

In the spleen, liver, and kidney were numerous phagocytes, each containing from one to eight faintly outlined red cells, in nearly every one of which was a parasite. Many cells filled with pigment were found in the lungs. Acute inflammation with segmentation showed in the myocardium. The spleen was engorged with red-blood cells and leucocytes. Fatty degeneration was pronounced in the liver. Acute parenchymatous nephritis showed in the kidneys. Anemia, with marked poikilocytosis, showed in the blood taken at autopsy, as well as that from the living patient.

Tissue taken from the spots in the skin, from lung, heart muscle, spleen, liver, kidney, meninges, brain, and spinal cord, showed a congestion of the capillaries, and many red-blood cells in these congested vessels contained the parasites of the disease.

Etiology.—Facts which seemed significant in a study of the etiology of the disease, were, the definite limitation of the locality and of the season of its occurrence, the lack of influence of age or sex, the fact that the lesions indicated a specific infection, that there was no suspicion of infection from one person to another, that neither food nor water supply seemed to have the slightest connection with the disease, that no lesions pointed to infection through the digestive tract, respiratory or genito-urinary organs, and that in all the cases examined there were small wounds of the skin, said to have been caused by the bites of wood-ticks.

At the autopsies many cultures were made. No bacteria were obtained in any of the cultures from any of the cases which were of etiologic significance.

Protozoa.—In all of the examinations made of freshly drawn blood intracellular paracites showing ameboid movements were found. In some extracellular forms were also found. In direct cover-slip preparations and in sections from the lung, heart muscle, spleen, liver, and kidney, great numbers of red-blood cells were found, containing one or more parasites.

The organism varies greatly in different stages of its development. The smallest forms resemble slightly the hyaline bodies in malaria and very much the micro-organism of Texas fever. Perhaps one in ten of the infected red cells contain two instead of one of this form of the organism. In the second phase of the organism there is a solitary one within the red cell, usually ovoidal in form and about twice the diameter of the form just described. It frequently exhibits active ameboid movements. At the end of an hour and a half of observation of one of the organisms, a reddish brown granule, was apparently extruded from its body into the protoplasm of the cell, and the cell slowly came to rest. In the freshly drawn blood are sometimes found bodies (phase 3?) occasionally in pairs, about half the size of the smallest phase spoken of above, and exhibiting active Brownian movement.

In marked contrast to the small number of infected cells in the circulating blood is the great number of infected cells in the congested capillaries in the tissues removed at autopsy.

The absence of pigment from the organism of spotted fever would apparently separate it from the malarial group, and place it with that of Texas fever.

Drs. Wilson and Chowning presented numerous stained specimens of tissues taken at autopsies, in which the organism was demonstrated in many of the blood cells. One warmed slide showed the living organism in the freshly drawn blood of a rabbit infected with the disease. The infected rabbit was shown, and also an infected gopher brought from Montana.

BOOK NOTICES

International Clinics; Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the collaboration of John B. Murphy, M. D., Chicago; Alexander S. Blackader, M. D., Montreal; H. C. Wood, M. D., Philadelphia; T. M. Rotch, M. D., Boston; E. Landolt, M. D., Paris; Thomas G. Morton, M. D., Philadelphia; James J. Walsh, M. D., New York; J. H. Ballantyne, M. D., Edinburgh, and John Harold, M. D., London. With Regular Correspondents in Montreal, London, Paris, Leipsig, and Vienna. Volume II, Twelfth Series, 1902. Philadelphia: J. B. Lippincott Company, 1902.

From the carefully prepared and scientific article on the treatment of diabetes mellitus with which the book begins, to the learned special paper at the end upon the function of the digestive glands, there is little or nothing in this volume of the Clinics that one would care to miss. Perhaps the chief charm of the works of the whole series is their readableness. Elsewhere may be found as much information upon medical topics but never in a form that arrests and occupies the attention like these clinical lectures. There is about a lecture a colloquial style that interests when the more formal and precise language of writing is unattractive. Between the two lectures quoted above as the beginning and end of the volume, particular interest attaches to a discourse by Finger upon the treatment of acute urethritis, Robin upon the medical treatment of simple ulcer of the stomach, Hemmeter on gastro-intestinal autointoxication, Jonnesco, of Bucharest, on resection of the cervical sympathetic and a clinical lecture by Kelly, of Baltimore, including a variety of cases.

THE DISEASES OF INFANCY AND CHILDHOOD. Designed for the Use of Students and Practitioners of Medicine. By Henry Koplik, M. D., Attending Physician to the Mt. Sinai Hospital; Formerly Attending Physician to the Good Samaritan Dispensary, New York; Ex-President of the American Pediatric Society; Member of the Association of American Physicians and of the New York Academy of Medicine. Illustrated with 169 Engravings and 30 Plates in color and monochrome. Lea Brothers & Co., New York and Philadelphia, 1902.

Koplik has for many years been a frequent contributor to current medical literature and has a good claim to that ill-defined position, a medical authority. A complete and systematic treatise upon his particular specialty, pediatrics, will be generally welcomed.

On the important subject of infant feeding one cannot refrain from comparing the few pages in this book with their simple rules to the large section and multitiudinous directions in Rotch. What most readers want to know is not so much the percentage composition of milk for various ages, but just how to modify cow's milk so as to adapt it to a particular child. Percentages are all very well for one who has access to a laboratory, but quite useless for the bulk of general practice which lies outside of metropolitan cities.

In a general way it will strike the reader that the articles are short, a fault, if it is a fault, that is generally pardonable. Especially short are the portions devoted to treatment, for the reason that the author does not think it necessary to republish the long list of remedies that have been used for each disease, remedies that the practitioner of experience has found for the most part have little power to modify the course of the disease. The therapeutic nihilist has a fine field in children's diseases, where, if you take out those that will get well whatever you do and those that will not get well whatever you do, the remainder is a sadly small quantity.

Attention is naturally attracted to the chapter on measles and to the author's account of those diagnostic spots upon the buccal mucous membrane to which his name has been attached. "Koplik's spots" are illustrated by half a dozen excellent colored plates (painted by Koplik himself by the way) and some practitioners, like the writer, seeing them pictured here, will see them for the first time after vainly searching for them in actual cases of measles during the last two years.

ATLAS AND EPITOME OF ABDOMINAL HERNIAS. By Dr. George Sultan, First Assistant in Surgical Clinic in Göttingen, Prussia. Authorized Translation from the German Edition by William B. Coley, M. D., Clinical Lecturer on Surgery, Columbia University, (College of Physicians & Surgeons), Surgeon at the General Memorial Hospital, Assistant Surgeon at the Hospital for Ruptured and Crippled, N. Y. City. With 119 Illustrations, 36 of them in colors. Philadelphia and London: W. B. Saunders & Co.

A small book of this kind will be generally welcomed by the practitioner, as well as by the surgeon. This work contains 119 illustrations, 36 of them in colors. The half-tones and drawings are admirable in detail, and show not only the outward manifestation of the hernia, but the anatomical relations beneath the surface so that one may study the displacement in all its varied states.

The operative steps are fully outlined, together with the accidents which follow the advent of the hernia.

The work is a fine supplement to a more exhaustive work.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. I. N. English, of Bertha, has moved to Tintah, Minn.

Dr. A. A. Flaten has moved from Edinburg to Grafton, N. D.

Dr. R. D. Gilmore, of Fosston, has removed to Bemidji, Minn.

Dr. Ernest Roesel has moved from Foxhome to Bluffton, Minn.

Dr. J. A. Schultz, a graduate of Rush, has located at Dundee, Minn.

Drs. Lockwood and Burton, of Hallock, Minn., will establish a hospital in that city.

Dr. David Bell has become a partner of Dr. B. G. Brandsen, of Edinburg, N. D.

Dr. F. W. Powers, of Barrett, a graduate of Hamline, has located in Herman, Minn.

Dr. Isabella Herb, of Rochester, Minn., is doing special work at Johns Hopkins' Hospital.

Dr. G. R. Pease has returned to Redwood Falls, Minn., after an extended vacation in the East.

Dr. C. W. Woodruff, of Wykoff, Minn., was married last month to Miss Dora A. Dunn, of Elgin.

Dr. A. J. Schmidt, who formerly practiced in Northfield and Faribault, died last month at Northfield.

Dr. E. D. Steel, of Mankato, Minn., has returned from Chicago where he has been doing special work.

Dr. Oscar E. Bennett, of Sanborn, Minn., was married last month to Miss Harriet Lathrop, of Vermillion, S. D.

Dr. Irael Lemieux, of Red Lake, Minn., was married last month to Miss Katherine R. Stuhr, of the same place.

Dr. A. O. Heiberg, of Rushford, Minn., has been obliged by ill health to retire from practice for several months.

Dr. J. H. Dudley, of Heron Lake, and Dr. David Gordan, of Elmore, have decided to locate in Albert Lea, Minn.

Dr. J. H. Crowe, who has been practicing for some time in Superior, Wis., has returned to Virginia, Minn., where he will remain.

Dr. Charles Coulter, a recent graduate of the State University, has located at Wadena, Minn., becoming a partner of Dr. J. J. McKinnon.

Dr. V. I. Miller, of Dundee, who recently decided to locate in Brookings, S. D., has changed his mind, and will go to Westbrook, Minn.

Dr. John R. Tobin, of Elgin, Ill., a graduate of Rush, has located in Preston, Minn., and entered into partnership with Dr. J. H. Phillips.

Dr. C. A. May, of Adrian, Minn., has gone east for a year's study, and he will visit Europe before his return. Dr. Slusser, of Lismore, will have charge of his practice.

Dr. J. B. Wellcome, of Sleepy Eye, Minn., has returned to his practice after several weeks of special work in the College of Physicians and Surgeons of N. Y. City.

Dr. Willard C. Foster, who graduated at the State University last June, has been appointed city health officer of Manila. The appointment was made after a competitive examination at Washington.

The Minnesota State Sanitary Association will meet in St. Paul, Dec. 17 and 18. After the business of the association is transacted the subject of city water supply will be considered, and on the second day the subject of tuberculosis will be discussed.

Dr. J. E. Doran, of Minneapolis, who has been traveling about the state as the representative of the "British Doctors," was recently arrested in Sioux Falls, S. D., upon the charge of obtaining a promissory note under false pretenses. He was bound over to the circuit court.

The Park Region District and County Medical Society was organized at Fergus Falls the last of October, with the following officers: President, Dr. T. N. McLean, of Fergus Falls; vice-president, Dr. J. Livingston, of Pelican Rapids; secretary, Dr. E. Hensel; treasurer, Dr. W. E. Truax, of Breckenridge.

The preliminary announcement of the twelfth annual meting of the Western Surgical and Gynecological Association at St. Joseph, Mo., Dec. 29 and 30, has been issued. Dr. J. E. Moore, of Minneapolis, is president of the association; and the following Northwestern physicians are represented on the program: Dr. A. E. Benjamin, Minneapolis; Dr. C. H. Mayo, Rochester; Dr. C. A. Stewart, Duluth; and Dr. J. W. Andrews, Mankato.

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MALIGNANT DISEASE INVOLVING THE GALL-BLADDER*

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Surgeon to St. Mary's Hospital

ROCHESTER, MINN.

In St. Mary's Hospital, Rochester, Minn., from June 24, 1891, to Sept. 23, 1902, 405 operations were performed for all causes upon the gall-bladder and biliary passages, and of this number, 20, or about five per cent, were for malignant disease. While this does not make it a common malady, it is sufficiently frequent to merit careful attention. The true proportion would perhaps be somewhat higher, as cancer of the gall-bladder like malignant disease of most of the internal organs, is slow to be recognized and is often, if not usually, so far advanced as to render even an exploration unnecessary, the character of the trouble being only too manifest on physical examination.

It is a question whether the relative number of cases in which cancer of the gall-bladder and bile passages are found and not subjected to operation would be more than five per cent of the number of gall-stone patients in which operation is refused, or the true nature of the condition is not recognized. Schroeder, after investigation of the subject, says that 14 per cent of gall-stone patients suffer at some time from cancer of the biliary apparatus.

This at once brings up the query as to whether there is an etiological relationship between gall-stone disease and cancer of the gall-bladder. Courvoisier found that 74 out of 84 cases of malignant disease of the gall-bladder had gall-stones. Siegert states that in 95 per cent of all cases of primary cancer of the gall-bladder, gall-stones are present, and adds this most significant fact, that calculi are found in only 15 per cent of secondary malignant disease of this organ.

Beadles, in the London Cancer Hospital, found that in four cases of primary cancer of the liver, gall-stones were present in all, and in 36 secondary liver cancers, gall-stones were not detected in a single instance. Musser gives the percentage of gall-stones in the cases of primary cancer of the gall-bladder which he found recorded as 69 per cent, but says that in many of the instances in which no stones were discovered it was probable that the calculi had passed. In all of the cases of cancer of the gall-bladder in our own series which were explored, gall-stones were present. Kelynack, in an exhaustive examination of the subject of cancer of the gall-bladder and bile ducts, placed the proportion of primary cancer of the gall-bladder at 75 per cent of the whole, giving 25 per cent as the number of primary cancers of the bile ducts.

Kelynack called attention to another noteworthy fact, that cancer of the gall-bladder is at least three times as frequent in women as in men, and this proportion is also true as to gall-stone disease.

Siegert found 79 females to 14 males. Cancer of the gall-bladder is most common between the age of 50 and 60, which is the period of greatest frequency of gall-stones. Sutton states that columnar epithelium from the mucous membrane is the type of the carcinomatous process, but says that in most instances it could not be determined whether its origin was in the mucous glands or the epithelium.

It is to be noted that the cholesterin which forms the chief constituent of gall-stones is also a product of the mucous membrane. Butlin says that the cancerous ulcer is the most common form. · Sutton has found general carcinomatous infiltration of the gall-bladder forming a hard thick-walled tumor with a small cavity containing stones, to be the more common variety, and with this latter group could be placed the cases which we have recorded. It will be observed that these two varieties which compose the majority of the reported specimens, not only contained stones, but the primary lesions would suggest at once this probable source of irritation. Other gross forms of malignant disease of the gall-bladder are also found, particularly that type in which a tumor projects into the cystic cavity. The site of origin of cancer in the gall-bladder is usually near the fundus, although a considerable number have been discovered near the opening of the cystic duct. Perforation into the peritoneal cavity has rarely ensued, and general peritoneal infection taken place. The viscera may be found studded with little cancerous growths, causing ascites, or fistulous openings between the gall-bladder and the hollow viscera may occur. The most common method of extension is to the adjacent liver, either directly or through the blood-vessels, and to the lymphatic glands lying in the hepatic fissure. So far as we could discover, there has been no recorded case of operation for primary sarcoma of the gall-bladder, although a few post-mortem specimens have been exhibited. Musser found three such cases recorded in the literature.

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*Read before the Minnesota Academy of Medicine, October 1, 1902.

The following indisputable facts attract attention: First, gall-stones are almost constantly present in primary malignant disease of the gall-bladder and rarely in secondary; second, the relative proportion of gall-stone and malignant disease of the gall-bladder in women and men is practically identical; third, the pathological lesions found are best explainable on this theory; and, fourth, the similarity in age frequency. Certainly we are warranted in concluding that gall-stones are the most important etiological factor in malignant disease of the gall-bladder. As the proportion of cancerous disease involving the gall-bladder and bile tract to simple gall-stone disease was as one to 20 in the 405 operations upon the gall-bladder and bile passages, the question assumes practical importance, and while I would not wish to say that for this reason alone gall-stones should be removed, it certainly aids in deciding that early removal of active gall-stones, other things being equal, is sound surgery, particularly so as nearly all the mortality-giving complications are the result of delay. In over 250 uncomplicated gall-stone operations, the mortality was less than one per cent.

The diagnosis of primary cancer of the gall-bladder may be easy. As a rule, a hard tumor is to be detected in the region of the gall-bladder, which is not very tender to touch, and unless there is a peritoneal involvement, rigidity of the overlying muscles is not marked. There is progressive loss of flesh and later a cachexia is developed. A nodular tumor becomes apparent as the liver is involved and jaundice from extension to the common and hepatic ducts in the later stages may occur. A previous history of gall-stone disease can usually be obtained. Naunyn says that at least one-half of the cases of jaundice diagnosticated as due to gall-stones, are caused by cancer or complicated with it. In our experience, this is too high a percentage. The jaundice, when it exists, is persistent and unchanging, and if a tumor is present which is accompanied by a loss of flesh, which appeared before the jaundice, there can be but little doubt as to the malignant nature of the trouble. Courvoisier long ago pointed out that stone in the common duct was accompanied by a contracted gall-bladder in 84 per cent of cases, and in the latter disease the jaundice in the early stages is intermittent and often accompanied by occasional chills and fever, due to an accompanying infective cholangitis.

We have seen a cystic gall-bladder of long standing, due to stone impacted in the cystic duct, give rise to a hard tumor resembling malignant disease, and occasionally such a tumor may result from an adherent gall-bladder shrunken down upon a mass of stones. The local tenderness and history of sudden appearance with the general condition of the patient will usually be sufficient to differentiate. It sometimes happens that even on the operating-table it is impossible to say whether a thick-walled gall-bladder is malignant or not. Robson reports a case in which no fluid was found on puncture, but the hardness of the enlarged gall-bladder and the bad general condition of the patient led him to the conclusion that it was malignant disease.

Drainage was established and permanent recovery followed. Abbe reports an almost identical case. The opposite mistake may also be made. The following case occurred in St. Mary's Hospital:

Case i—Cholecystectomy for gall-stone disease. Unsuspected malignancy.—Mrs. J. R——, aged sixty-four years, admitted to the hospital Sept. 9, 1901. The following history was obtained. For some years the patient had suffered from typical gall-stone colic. In September, 1900, had a very severe attack, during which her physician, Dr. Slocumb, of Plainview, Minnesota, could distinctly feel the enlarged gall-bladder. This was suddenly relieved and the tumor disappeared. She has lost a great deal in weight and is in constant pain.

Physical examination.—Patent cachaetic, slightly jaundiced, liver dulness indefinite, perhaps slightly enlarged. No tumor could be felt on palpation. Nothing else of importance was noted.

From the history a diagnosis of gall-stone disease was made. On Sept. 10, 1901, through the usual incision, an exceedingly adherent and very thick-walled gall-bladder was exposed. In the small central cavity a few gall-stones were found. One stone was impacted in the cystic duct. The patient was in bad general condition and drainage of the gall-bladder was instituted. Cholecystectomy would otherwise have been done. No suspicion existed that the gall-bladder was cancerous. The condition was supposed to be due to inflammatory thickening. Patient was discharged in three weeks. The relief obtained from the operation was but temporary. The pain returned and a tumor soon afterward appeared and rapidly enlarged, followed later by jaundice and death about four months after the primary operation.

Cholecystectomy is gradually displacing drainage in the class of cases accompanied by marked changes in the wall of the gall-bladder and it is probable that many early cases of cancer will in this way be discovered and removed. Practically all of the unoperated cases die within the year, although a few have been reported in which life was prolonged to nearly two years. Musser says that only a few months of life is to be expected and that this has not been prolonged by operation in the majority of the reported cases. The first removal of the gall-bladder for malignant disease took place in 1887. The number of cases reported is small. Robson had four personal cases of which one died as a result of the operation. Butlin collected 16 cases operated upon with 12 recoveries and of these nine died from recurrence on inefficient removal within four months.

The following two cases are of interest in this connection:

Case ii—Cholecystectomy for cancer of the gall-bladder. Recurrence after one year.—Mrs. M. H——, aged sixty-three years, American, housewife, widow. Admitted to St. Mary's Hospital June 12, 1901, with the following history: For some years has had occasional attacks of cramps in the stomach lasting from a few minutes to several hours and necessitating the exhibition of morphia for relief. For three months there has been a steady boring pain in the region of the gall-bladder extending through to the back. There has been considerable loss of flesh. In the early history some transient attacks of jaundice followed the spells of pain, although the icterus was never marked. Personal and family history otherwise negative.

Physical examination revealed nothing beyond a deep-seated resistance in the region of the gall-bladder. Diagnosis, gall-stone disease. Operation June 15, 1902. A thick-walled gall-bladder densely adherent and containing a few small gall-stones in its nearly obliterated cavity. The appearance was suspicious and the gall-bladder was dissected out and drainage established. Discharged in three weeks. Unfortunately the specimen was lost and it was not until the patient presented herself with the subsequent history that the diagnosis was established. She had remained well for over a year. July 2, 1902, began to have a return of the pain and jaundice developed. An irregular, deep-seated tumor at the site of former operation could be discovered on deep palpitation—a manifest recurrence of cancerous disease.

Case iii—Cholecystectomy for cancer of the gall-bladder. Recovery. Mrs. T. McD——, Irish, married, housewife, aged fifty-six years, was admitted to St. Mary's Hospital June 19, 1902, with the following history: For several years has been subject to attacks of cramping pain in the stomach lasting from a few minutes to several hours. For the past year these attacks have increased in severity and for several months the pain has been more or less continuous accompanied by loss of flesh and some jaundice. The latter symptom has been variable but never entirely absent. History otherwise negative.

Examination.—Patient shows loss of flesh and strength, somewhat jaundiced, pulse 110, temperature, 97½° F. Trace of albumin and considerable bile in urine. Liver dulness increased, no tumor in region of gall-bladder, tender to pressure in the epigastrium and right hypochondriac region. Diagnosis.—Gall-stones with probable stone in common duct. Operation.—June 21, 1902, straight incision through right rectus muscle, gall-bladder buried in a mass of adhesions. It is of small size with great thickness of the walls. Stone obstructing cystic duct at its juncture with the common duct apparently compressing the latter. Appearance of gall-bladder suspicious. Cholecystectomy with hepatic drainage through cystic duct. Discharged in 24 days. Specimen shows carcinomatous infiltration.

In a number of instances the adjacent liver has been involved and yet the diseased process was sufficiently localized to permit of resection of the infiltrated parts. The surgical treatment of such tumors has been thoroughly reviewed by Keen, Ferrier and others and personal cases reported. When complicated with jaundice, the mortality is very high. The following case illustrates the condition found in a more advanced case.

Case iv—Cholecystectomy and partial hepatectomy for cancer of the gall-bladder involving the liver. Recovery, followed by recurrence.—Mrs. E. R.——, American, aged sixty-five years, was admitted to St. Mary's Hospital of Rochester, Minnesota, April 18, 1900.

History.—She has been in her usual health until within last six months. During this time she has suffered from a boring pain in right side, which of late has become almost constant. Stomach symptoms have been of moderate severity. There has been some loss of appetite and constipation with a decrease of 15 pounds in weight. No jaundice, nor history of colics. Examination reveals a somewhat movable tumor in the right hypochondriac region evidently connected with the liver. The mass has a nodular feel. Exploratory incision April 21, 1900. A carcinomatous gall-bladder involved the adjacent portion of the liver and the cystic duct. There was some infiltration along the common duct and extending to the duodenum, upon which at one place there was a considerable area of adhesions. A few glands in the angle between the cystic and hepatic ducts were infected. The disease was so definitely circumscribed with such slight glandular involvement that the removal of the affected area was decided on. The excision was begun at the common duct, two inches of which was removed with one-half inch of the hepatic duct. The vessels were caught and tied as divided; the area of adherent duodenum the size of a silver half-dollar was included in the excision. The opening in the intestine was closed by circular purse-string suture. The lower end being thus free, the gall-bladder with the attached liver, was removed with the Pacquelin cautery knife. The larger vessels were grasped with forceps. The free venous oozing from the liver substance was not controlled by the cautery, although easily checked by slight pressure, the blood-current being of little force. A piece of sterile gauze, the size of the wrist, was placed in the cavity and a continuous suture of fine catgut was run through the liver substance on each side of and around the gauze, compressing the bleeding liver margins against it, and efficiently controlling the hemorrhage. The portal vein was exposed to a considerable extent in the bottom of the cavity. Adequate drainage was afforded, the bile being conducted to the surface. Recovery was uneventful. The gall-bladder contained a single stone three-fourths inch in diameter. Patient died four months after operation from recurrence.

So far as I have been able to discover, all of the cases in which the liver was involved secondary to primary cancer of the gall-bladder have had early recurrence. This is also true of the cases in which the lymphatic glands in the fissure of the liver were infected. Jaundice occurs in about one-half of the cases, and as it is a late symptom, operation is contraindicated. The increasing frequency of operation for gall-stone disease will lead to the accidental discovery of cancer in an early stage and the results of operative interference will vastly improve.

THE RELATIONAL PATHOLOGY OF PNEUMONIA*

By H. A. Tomlinson, M. D.

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ST. PETER, MINN.

The consideration of this aspect of the subject of the pathology of pneumonia was suggested by the observation, that those cases of pneumonia in which the lung substance was most involved, were not necessarily the most fatal. This experience suggested certain inquiries, to which considerable attention has been given in our clinical and post-mortem work during the past eight years. They are as follows: Is it probable that a pneumonia ever begins in a lung that is absolutely sound? and, if not, what is the nature of the defect or weakness in its structure? Why does the disease involve the parenchyma of the lung primarily? and what determines its locality in the lung involved? Is the disease pneumonia limited to the lung? and is the involvement of its structure the cause of the symptoms present?

Before attempting to answer any of these questions, it is important to have a clear conception of the function of the lungs and what is comprised in their physiological activity. Without going into familiar details, it will suffice to say, that, like the other vegetative organs, the lungs have a nutritional and a functional circulation, the vessels of the nutritional circulation being distributed in the walls of the structure, while the functional circulation is carried between and around the walls of the alveoli and air-vesicles. The function of the lungs, like that of the kidneys, is largely a chemical one, and has for its object the liberation of carbonic acid from the blood, and the introduction of oxygen in its place; besides, the lungs have certain physical relations with the heart, on account of its location in the chest cavity, and these relations are most important to remember in connection with pneumonia.

Foster† says: "The heart and great blood-vessels are, like the lungs, placed in the air-tight thoracic cavity, and are subject, like the lungs, to the pumping action of the respiratory movements." "We may add that any obstacle to the free ingress of the inspired air, any difficulty in the full expansion of the pulmonary alveoli, of course increases the negative pressure to which the thoracic structures outside the lungs are subjected by the expansion of the chest." In addition to the influence thus exerted by the thoracic movements on the great veins leading to, and the great arteries leading from, the heart, we have to consider the behavior of the pulmonary vessels themselves under the varying thoracic pressure. These, like the venæ cavæ and aorta, tend to expand under the influence of the inspiratory expansion of the chest, and thus to become fuller of blood, very much as they would if the whole lung were placed under a large cupping-glass. The first effect of this increased filling of the pulmonary vessels would be to retain for a while a certain quantity of blood in the lungs; and thus lessen the amount of falling into the left auricle. But this would be temporary only; and the widening of the pulmonary vessels would speedily produce an exactly contrary effect, namely, an increased flow through the lungs; and thus lessen the amount falling fered by the widened passages. Conversely, the first effect of expiration would be an increased flow into the left auricle due to the additional quantity of blood driven onwards by the partial collapse of the pulmonary vessels, followed by a more significant diminished flow caused by the greater resistance now offered by the narrower vascular channels."

This description of the relation between respiration, the heart and great vessels in the chest cavity, gives the clearest indication as to how the condition of the blood-vessels in the lung in pneumonia gives rise to the disturbed relation between the function of the lungs and the action of the heart. With the alveoli and smaller bronchioles filled with the fibrinous transudate, the engorgement of the pulmonary vessels and the necessary edema resulting from lymph stasis, destroy the adjustment of the supply of blood taken from and returned to the heart, and the condition referred to above as existing temporarily during the first part of the act of inspiration and the last part of the act of expiration, becomes persistent. Not only is there a relatively smaller amount of blood returned to the left auricle, but there is an increasing amount kept back in the right ventricle, and the blood emptying into the left ventricle contains an ever lessening amount of oxygen; besides, its reduced hemoglobin does not become completely oxidized. In other words the toxic substances resulting from tissue metabolism are not removed, and the work belonging to the lungs must be done by the skin and kidneys; while the imperfect functional activity of the gastro-intestinal canal resulting from the depressing effect of the illness upon the vitality of the general organism, renders the processes of digestion and assimilation imperfect, thus adding to the toxemia. This further increases the work of the skin and kidneys, and gradually involves the nervous system. In fatal cases of pneumonia the mode of death always suggests the extent and order of this involvement. If these conditions result from the sequential involvement of the functions of the vegetative organs which are sound and healthy, how much greater must the disturbance be and how much more serious its effects when superadded to chronic gastro-intestinal intoxication, the effect of damaged kidneys, or in the presence of a chronic myocarditis or a weakened fatty heart.

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† Foster's Physiology: Sections 382 and 383.

*Read before the Minnesota Academy of Medicine, November 5, 1902.

In discussing the subject of the pathology of pneumonia, consideration is usually given only to the involvement of the pulmonary tissue, and we are left to infer that in fatal cases the cause of death lies always in the involved portion of the lung. However, experience in post-mortem work will show that death frequently takes place in cases where only a relatively small amount of lung substance is involved; also that it is not infrequent to find in cases of illness, where death has been due to some other obvious cause, a greater amount of involvement of the parenchyma of the lung than is found in fatal cases of pneumonia. It may be argued that the specific cause of pneumonia, on account of the nature of the toxemia it produces, is sufficient to account for any discrepant relation between the amount of the lung substance involved and the fatal termination; but it must be considered that, if this were true, the incidence of fatality must necessarily always be in proportion to the extent of the pneumonia, because, presumably, the pneumococci are present and active in proportion to the area and degree of inflammation. Further, while it is generally accepted that primary lobar pneumonia is practically always the result of the specific action of the micrococcus lanceolatus, and that lobular pneumonia is usually caused by the pneumobacillus, yet both of these pathologic conditions are commonly present in other diseases as concomitants; particularly so in typhoid fever and septicemia, and quite frequently in the exanthemata. It is interesting to note in this connection that in the exanthemata broncho-pneumonia is most frequent, while in typhoid fever and septicemia from other cause, lobar pneumonia is commonly present. This may be accounted for by the fact that, so far as known, in the exanthemata the lungs become involved from the trachea down by the extension of the irritation produced by the presence of the eruption, while in the pneumonia associated with sepsis, the lung is affected through the general circulation, the source of the irritation being in the pulmonary vessels. In lobar pneumonia there is developed in the lung tissue by the immediate cause of the attack a lowered power of resistance, which makes possible the rapid growth and dissemination of the pneumococcus and the toxins which result from the processes of its life cycle. The congestion of the parenchyma of the lungs is not different probably from congestion resulting from any other cause; that is, it is vasomotor stasis. But there follows either in a portion of one lobe, the greater portion of the lung, or may be in both, a transudation of blood into the alveoli and smaller bronchioles of the part affected, and this blood becomes coagulated just as any blood does when exposed to the air, but not like the clotting which occurs after thrombosis or hemorrhage into the substance of the lung. The process after this, so far as it affects the lung itself, is simply that of aseptic or septic liquefaction, slow or rapid according to the degree of vitality of the patient and the nature of his environment. It is well to remem-

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†Foster's Physiology: Section 382 and 383.

ber that as soon as liquefaction of the fibrinous exudate begins, a new process is set up which has nothing to do with the disease present, but is common in the presence of collections of foreign material anywhere in the organism. So long as it remains aseptic, it is simply liquefaction and absorption through the lymphatics; but in proportion as it is septic and the mucous lining of the bronchi becomes involved, the process becomes changed, the liquefaction is accomplished through suppuration, and the material has to be gotten rid of by expectoration, which is a much longer process. These two processes are well illustrated by the two usual modes in the establishment of convalescence in pneumonia. Simple liquefaction results in crisis, while the disintegrative process is characteristic of lysis.

It is unfortunate that statistical studies of pneumonia do not give us any information with regard to the individual, and even our text-books do not say much about the patient. We do not know his family history and the tendencies he inherited, his life history, the condition of his arteries, the vegetative organs, or the nervous system. In other words, the most important factor affecting prognosis, is not considered at all—I mean the natural power of resistance in the individual. This suggests the significance of the first of the questions referred to in the beginning of this paper. A pneumonia involves a portion of one lung or both, usually at the base and posteriorly, probably as the result of the influence of gravity, because during the period of congestion the patient lies down, and when transudation begins it will naturally occur in the most dependent part. Now, it is also a fact that in the ordinary case of pneumonia the three stages may be represented at the same time, showing the tendency of the transudation to extend and involve new areas successively. In only rare instances is the whole of one lung, or both, involved at once; and when this does occur the cause of the powerful reduction of vitality which made it possible is apparent in the history of the conditions which preceded the illness. But the question, why the pneumococcus, which is present in most people's throats all of the time, should only occasionally produce pneumonia, and then in particular individuals, is not thus answered. It is a well known fact that this germ may produce meningitis and not affect the lungs, it is also found in abscesses beneath the skin, about the joints, and in the internal organs. In fact, it behaves like an ordinary pus-forming bacterium, while in the lungs it does not by itself produce suppuration. Again, two individuals living in the same environment, and equally exposed, will become ill, the one with lobar pneumonia, the other with acute rheumatism, gastro-intestinal disease, or nephritis. What then is the determining factor? It seems obvious that it must be the potentiality of the pulmonary tissues of the individual, and that the extent of the pneumonia will depend upon the cause and degree of lowered vitality as well as its persistence. So far as we have been able to study the history of cases of pneumonia occurring in the hospital at St. Peter, we have not failed to find direct or collateral heredity of lung disease. This study covers a period of eight years, and involves about 100 cases of lobar pneumonia.

Pneumonia occurs under so many different conditions that it is impossible to reckon any particular source from which it develops as specific. There is no difference symptomatically or anatomically between the pneumonia following a traumatism, exposure to cold, typhoid fever, or the inspiration of a foreign substance. Besides, all of these conditions or any of them may be present in a number of individuals, and yet no pneumonia result. As stated previously, we are compelled to consider the factor of resistance in the pulmonary tissue of the individual as well as certain temporary conditions in the environment of the patient, which may exaggerate his susceptibility. Every physician of experience comes to recognize tendencies in the members of families with whom he becomes familiar, and to fear always certain reaction, whenever any cause of disease exists. In some this limitation of resistance is slight, and may be only potential, because there is no reason to suspect it except from the evidence furnished by the family history of the individual. The experience is not uncommon that families have pneumonia just as others have rheumatism, gout, or nephritis. Some members escape it entirely, and in others a very profound shock, such as that resulting from influenza, typhoid fever, or a severe traumatism with exposure, is necessary to develop the family tendency in individuals. Again, only late in life and as concomitant of nephritis or cardiac failure will the pneumonia develop. This latter is more particularly true of lobular or bronchopneumonia, which is much more frequent among people past middle life than the true fibrinous pneumonia. Therefore, the conclusion seems to be warranted that even if the presence and active proliferation of certain bacteria are necessary to the development of a pneumonia, the pulmonary tissues of the individual must be primarily susceptible, and certain conditions which lower vitality are necessary in order that the bacteria may grow and the toxins developed make their morbidity actual. Of course, too, in those cases where the susceptibility of the lung tissue was considerable, the area involved in the pneumonia would obviously be greater, and the affection of the lung more likely to be complicated. In our experience with pneumonia among the insane, it is quite common for lobar and bronchopneumonia to be associated, and termination by lysis is the rule.

If what has been here stated is true, it would seem that in the study and treatment of pneumonia, the involvement of the lungs *per se* is less important than the condition of the general organism before the attack, or the pre-existence of chronic disease in one or more of the vegetative organs, which interferes seriously with nutrition or elimination. For instance, in chronic fibroid phthisis it sometimes happens that practically all of the lung tissue, except the anterior margins of the lobes, may be involved in the degenerative process, and yet the individual live on indefinitely, without any apparent embarrassment of respiration. Even in those cases where the suppuration of a chronic tuberculous process is present, and a considerable portion of the lung tissue destroyed, there may be no difficulty in breathing except on exertion. In 1896 a patient died in the hospital at St. Peter quite suddenly, apparently from uremia. She had had a mammary carcinoma for more than a year, and for six months before her death her urine indicated the presence of chronic diffuse nephritis. In the afternoon of January 31 she had a syncopal attack, with extreme pallor. She remained conscious, however, answered questions readily, and did not complain of pain. The respiratory rate was 19, and did not increase before her death, although the effort was labored and heaving in character. The left side of the face was partially paralyzed, and the tongue deviated to the right. There was no difficulty in swallowing, and speech was distinct. The radial pulse could not be felt, and the heart's action was feeble and irregular, the right heart being dilated. She died that evening.

Besides the involvement of the breast and surrounding parts, as well as the diaphragm, the following conditions existed in the chest cavity: The left pleural cavity contained a small amount of clear fluid, but there were no adhesions. The lung weighed 528.8 gms. Its entire surface was studded with nodules, some of which were umbilicated. The lobes were adherent to each other. On section the whole lung showed evidence of beginning infiltration with new growth, and in certain areas at the base there was consodidation. The right chest cavity was completely filled with partially organized adhesions, gelatinous material, and 2500 c. c. of clear fluid. In different areas the trabeculæ remained, forming saccules in which clear fluid was encysted. Considerable air was also found in the meshes of the connective tissue. Both cavities of the heart contained dark clots, and the right side was greatly dilated. However, the floor of the fourth ventricle of the brain was edematous and granular, the puncta were numerous and prominent, and 4 mm. beneath the floor of the ventricle, to the left of the median line, involving the tenth nerve nucleus, was a recent embolus measuring .6x.6x.6 mm. This latter condition of course accounted for the sudden death. This woman had been going about, occupying herself as usual, taking a fair amount of nourishment, and sleeping well; and there was no embarrassment of respiration apparent. Again, it is not uncommon to see cases where only a single lobe of the lung is involved, or even less, in which the respiratory-rate is greatly increased, the temperature high, the systemic disturbance marked; and these cases frequently terminate fatally, while, on the contrary, cases occur in which a considerable portion of both lungs is involved, and yet the suffering is slight, the embarrassment of respiration not conspicuous, the cardic involvement not alarming, and recovery takes place. There is the record of two such cases in the hospital at St. Peter: One a woman 65 years old, the other a young man 25 years old. In the case of the old woman the attack was an acute lobar pneumonia involving both lower lobes on the right side and the lower lobe on the left. The clinical picture was astonishing on account of the absence of grave symptoms, which should have been present in pneumonia in a person at her age and with the amount of lung tissue involved. The attack ended by crisis on the tenth day. In the young man the illness was more serious because the pneumonia involving both lungs to half their extent ushered in an attack of typhoid fever; yet the action of the heart remained strong and regular, and the acute attack ended by crisis on the fourth day. Two days later the Widal reaction was present, and there followed a typical illness with typhoid fever.

It is true that the cases cited here represent possible extremes, but the variations between them simply confirm the deductions which naturally follow, concerning the relational pathology of pneumonia, and supply the reason for the last query: Is the disease pneumonia limited to the lung? and is the involvement of its structure the cause of the symptoms present? If such a discrepancy between the amount of lung tissue involved in lobar pneumonia, the symptoms, and the termination of the illness exists, there must be some reason for the difference in the physical conditions present independent of the pneumonia, and which are antecedent to the illness or its concomitants. They therefore become the chief factors in prognosis and treatment.

When crisis is established in an uncomplicated case of lobar pneumonia the symptoms, no matter how alarming they may have been, subside, the respiration becomes easier and slower, the pulse stronger and fuller, the temperature drops, and the skin, formerly hot and dry, becomes cool and moist; and yet, so far as we can determine from physical examination, the condition of the lungs has not changed, the alveoli and bronchioles are still blocked by the fibrinous transudate, the engorgement of the pulmonary vessels persists, and the area of lung tissue to which free ingress of air is possible has not increased, although it is probable that the subsidence of the congestion in the parts of the lung structure not involved by the hepatization is relatively rapid. The heart grows stronger, the amount of urine increases, the tongue cleans off, and the digestive capacity returns. However, the liquefaction and dissipation of the fibrinous transudate is only gradual. In those cases of pneumonia which are associated with other acute disease conditions, this sequence is modified, and yet cases occur, especially in connection with typhoid fever, where the pneumonia seems to run its course independently; while in those cases which end by lysis, the prolonged illness is not so much due to the pneumonia as to the secondary infection, which changes the character of the process, and prolongs the effort of the lungs to rid themselves of the accumulation of foreign material. It would seem, then, that the disease in pneumonia, aside from the mechanical effect of the hepatization, must be general rather than local, and that the progress of the disease, and termination, are really dependent upon the incidence of the intoxication upon the general organism and its power of resistance.

Owing to the intimate association of the functions of the heart and lungs, the capacity of the latter to withstand the strain put upon it by the interference with the pulmonary circulation, and the change in the quality of the blood which comes from the lungs, is a matter for serious consideration, and therefore the antecedent condition of this organ is a prime factor in the pathology of pneumonia.

Of 25 cases of lobar pneumonia dying and coming to necropsy in the hospital at St. Peter, the following cardiac conditions were found. The heart enlarged in 7 cases. The heart small in 8 cases. Fibroid degeneration (so-called chronic myocarditis) in 20 cases. Fatty degeneration in 3 cases. Fatty infiltration in 5 cases. Valvular disease in 3 cases. Chronic endocarditis in 22 cases. Narrowing of the coronary orifices with atheroma of the coronary vessels in 14 cases. The right heart dilated in 24 cases. The left heart dilated in 12 cases. In all of these cases the kidneys were involved, and there had been evidence of renal inadequacy in 13 of them for some time before the onset of the pneumonia. The commonest form of nephritis was the diffuse, and the most rapidly fatal cases were those in which there was an acute parenchymatous exacerbation engrafted upon the chronic nephritis. Only five of the cases were primary lobar pneumonia, the balance being terminal conditions associated with tuberculosis or nephritis, with the exception of two which occurred in connection with typhoid fever.

In our experience auto-intoxication, gastro-intestinal in origin, and failure of elimination due to renal inadequacy, are the greatest sources of danger in pneumonia. The retention of the toxins of the pneumonia on account of the failure of the function of the kidneys, coupled with the added intestinal intoxication, not only keeps up the temperature but also involves the nervous system and adds delirium and insomnia to the strain upon the vitality of the organism.

Delirium and insomnia mean auto-intoxication in the nervous system and exhaustion of vitality, but that they are not due to the pneumonia is shown by the fact that they are frequently present in cases where only a small amount of lung tissue is involved, and often absent when the pneumonia is extensive. The role of the nervous system in the production of pneumonia is not a direct one, because of the nature of the function of the lungs, their chief dependence upon the nervous system being for their mechanical activity. So far as we can judge, however, the influence of the nervous system must be considerable, because the beginning of pneumonia, as indicated by the congestion and transudation, must result from involvement of the vasomotor apparatus through the ganglionic nervous system. Indeed, pneumonia sometimes follows direct nervous shock, as well as the shock resulting from severe traumatism.

Just what is the change in the alveolar and capillary walls which allows the transudation of blood into the air vesicles, is not demonstrable. but as there is no apparent solution of continuity, nor primarily any destruction of the walls of the capillaries or membrane of the alveolar septa, it would seem almost certain that this influence is a nervous one. Like congestion elsewhere there must be, at first, a vasoconstriction with temporary ischemia,to be followed by vasodilatation and stasis. The blood not having any longer a natural outlet and the capillaries being distended, transudation becomes possible through the tenuous stroma of the alveolar septa by an exaggerated diapedesis, and this conception is strengthened by the fact that leucocytes are numerous in the transudate.

Nothing has been said about antecedent conditions in the lungs themselves, because their influence is obvious, and, besides, their pathology is hardly relational. It is true that they complicate seriously not only the clinical course of the pneumonia but the convalescence as well; and this is especially true of old pleural adhesions and emphysema. They both interfere seriously with the pump-like aspiratory action of the lungs with relation to the great blood-vessels in the thoracic cavity, and therefore interfere with the general pulmonary circulation and make the labor of the heart greater. In fibroid degeneration in the lungs and in chronic phthisis, the individaul is protected, by the nature of the anatomical changes in the lung structure, in a measure from the ability to lobar pneumonia, but for this same reason he is more liable to have bronchopneumonia and pulmonary thrombosis.

ACUTE RHEUMATISM

Dr. George Dock, Ann Arbor, in an interesting article in the Phys. and Surgeon, states that the first thing to be observed in the treatment of rheumatism is rest, however mild the symptoms may be. Flannel night clothes should be worn. Rest for the affected joints should be especially considered. This can be secured by well-applied woolen bandages, and if necessary render the joint immovable by applying splints. The patient should be kept in bed as long as there is fever and joint pain. The diet in the febrile stage must be light, and water given freely. Tea, coffee and alcoholics should be avoided.

The bowels should be moved with small doses of calomel. As to the drug treatment, he recommends the salicylates, but emphasizes the importance of giving them in large doses. The system should be saturated. Not less than 120 grains should be given within twelve hours. He recommends sodium salicylate combined with an alkali such as sodium carbonate given similar to the following:

℞ Sodii salicylatis.
Sodii carbonatis, aa ʒ ij.
Aq. camphoræ, q. s. ad ℥ vj.

M. Sig. One tablespoonful in water every hour.

He adds that patients with acute nephritis or old interstitial nephritis should not be subjected to the foregoing treatment.—Jour. A. M. A.

LAUDABLE RULE

Apothecary (to new helper) "And this is aqua distillata. That's what we give to patients in very serious cases—you know, when we can't just make out what the prescription is."—Fliegende Blaetter.

HARELIP AND CLEFT PALATE*

By J. Warren Little, M. D.

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MINNEAPOLIS

The subject of cleft of the hard and soft palate associated, as it often is, with harelip, has for many years received the attention of the best surgeons, but still needs further elucidation. What, I believe, is especially needed is a report of results two or more years after operation, noting especially the results upon the voice. Neither Dr. Mason Warren, of Boston, who originated uranoplasty in 1843, nor Sir William Ferguson, who is said to have operated upon 300 cases, left us any record as to the results upon the voice. This is a great loss, for often, if we could be positive that the voice could not be improved, so difficult and trying an operation, for both patient and surgeon, would not be undertaken.

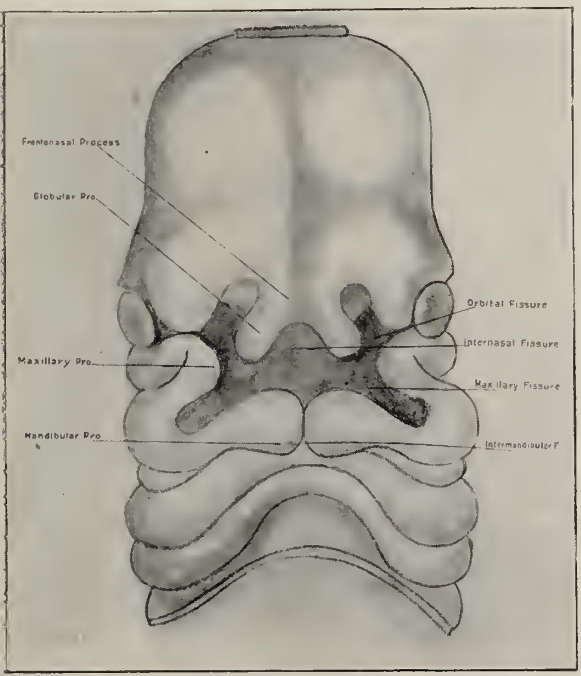

Fig. 1.

In order to have a clearer understanding of the congenital deformities of the mouth and lips, I wish to call your attention to the researches of Albrecht. This picture (Fig. 1) represents the head of an embryo, and the position of the facial fissures. "The common buccal and nasal cavity is formed by the growth of the mandibular arches on either side, from which are developed the lower jaw and the tissues which enter into the lower lip and floor of the mouth. The common cavity is then divided into buccal and nasal cavities by the development of the hard palate from the horizontal outgrowth of plates from the maxillary process. The nasal cavity further is divided into two by the down-growth of the perpendicular plate of the ethmoid and vomer from the frontonasal processes. A failure of union between these different parts explains the occurrence of the various kinds and degrees of deformity in harelip and cleft palate." "The researches of Albrecht have fully established the essential facts of development."—Warren and Gould.

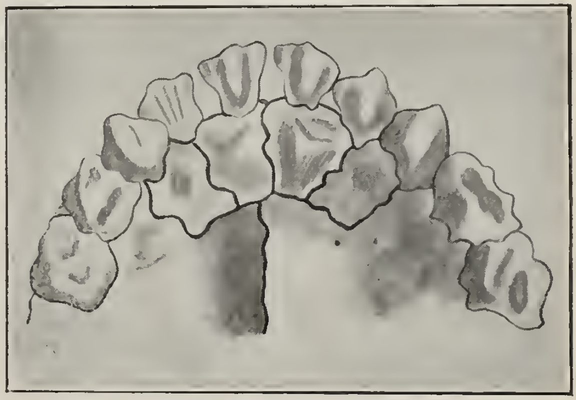

Fig. 2.

From the buccal aspect of the maxillary process springs the palatal process, which passes inward to blend with its fellow of the opposite side to form the soft palate and the whole of the hard palate, except the intermaxillary portion. From the same source are derived the cheek, the lateral part of the upper lip, and the upper maxillary bone. "The frontonasal process gives origin to the external nose, the ethmoid, the vomer, the median portion of the upper lip and the intermaxillary bones."—Treves.

This second picture from Albrecht (Fig. 2) shows the development of the intermaxillary bone, that snout-like projection which we see in complete double harelip and cleft palate. The four incisor teeth are inserted in this bone. It is composed, as you see, of four sections, named by Albrecht, gnathia, meaning jaw. Upon each section is implanted an incisor tooth. The two anterior sections are called the endognathion; the two lateral the mesognathion, and the hard palate the exognathion.

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*President's Address, read before the Minnesota Academy of Medicine, November 5, 1902.

Five sutures, you will see, unite these four segments into a wedge-shaped piece, extending well back into the hard palate. The os incisivum is formed by the union of the two endognathia, from which spring the two central incisor teeth. The lateral incisors spring from the mesognathion, and the cleft in the palate takes place between the endognathion and the mesognathion. This being true, it is seen that the central part of the upper lip and the part of the hard palate, upon which the two central incisor teeth are situated, are developed from one center; and the outer part of the upper lip and the rest of the hard palate from another. This explains why the cleft in the hard palate is on the side, and why harelip is not found in the middle of the lip, but on the side. Failure of union of the mandibular processes would result in harelip in the median line in the lower lip. The intermaxillary, the facial, the buccal, and the mandibular clefts can all be explained by the development of the embryo.

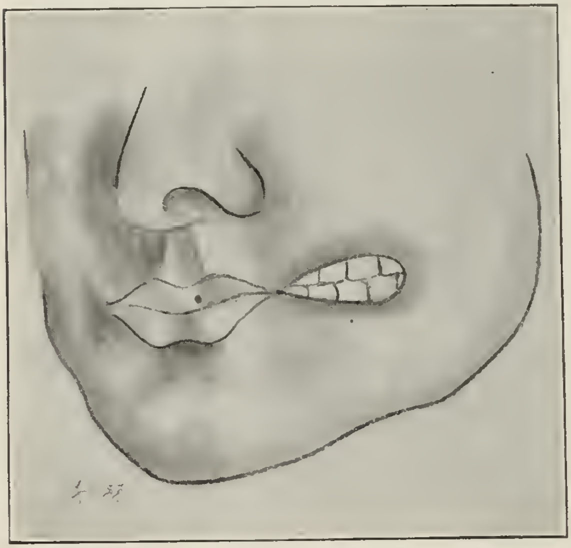


Fig. 3.

As union is shown to take place from before backward, it will be noticed that partial clefts of the hard palate are always in the posterior part, and then all of the soft palate is involved.

H. E. Dennell, D. D. S., of Boston, states that "All flesh-eating animals take as much of the bone with the flesh they eat as they can break with their teeth sufficiently fine to swallow, and all have good dental organs."

Several years ago the lions of the Zoological Gardens of London, were fed upon flesh containing too large bones for them to break and swallow. The young born, while this method of feeding was pursued, had cleft palates, and lived but a short time. The lions were then fed upon small animals whose bones they could break easily, and the young born afterward had perfectly formed palates. Dr. J. Ewing Mears, of Philadelphia, reports the same result in the Philadelphia "Zoo."

Is it not possible that a mother who has borne an ill-developed child might be spared a repetition of such a sad occurrence by suitable diet and medication?

I was led to give the subject of harelip and cleft palate more study, because I was frequently consulted by parents asking what ought to be done for their child, and what I could promise them. Adults also occasionally came, seeking relief for themselves. The advice I can give them now comes from some personal experience, but the larger and most valuable part from the consensus of opinion of such men as Jacobson, J. Collins Warren, Vander Veer, Branth, and Heath, among many of the later writers. I hope that as time goes on, and my opportunities for operation and observation increase, my advice may be much more valuable.

In a cleft palate, some idea of the benefit to be gained by operation can be had by noting the age of the patient; and, if old enough to talk, the character of speech; and by inspection of the cleft, if in the hard palate. We should note the width of the cleft so that we may calculate whether or not the edges can be approximated; and see if the vault of the palate is high, like a Gothic arch or low like a Norman arch. The high arch will be of material assistance to us in repairing the cleft. In inspecting the soft palate, we note not only the possibility of being able to approximate the edges after they are freshened, but especially the length of the palate, because if the soft palate is not long enough to shut off the nose from the mouth, the nasal intonation will not be remedied by operation.

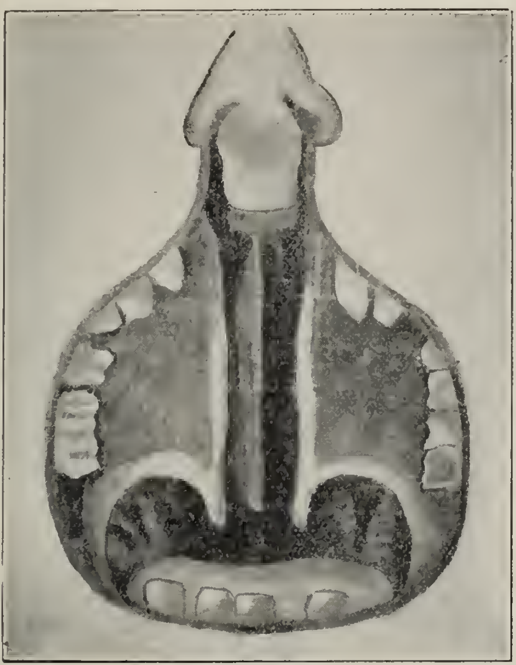


Fig. 4.

Having made the observations, we are in position to give a fairly rational and satisfactory opinion of what ought to be done, and what benefit will be derived from an operation. Heath says: "In no case of successful operation for cleft palate, is the palate sufficiently in contact with the back of the pharynx to allow water to be injected from one nostril into the other without entering the pharynx when the mouth is open, as is the case in well formed throats. And yet many of these patients have very little nasal intonation, which is to be explained, I believe, by the hypertrophied condition of the muscles forming the pillars of the fauces, which may be seen when the patient attempts to swallow with the mouth open, acting powerfully to narrow the fauces and to make up for the deficient length of the palate." From this statement it would seem that ordinary cases of hypertrophy of the tonsils should be let alone, and in severe cases demanding operation no more of the tonsil should be removed than is absolutely necessary.

Heath also gives directions as to examination of the patient as follows: "Before deciding therefore as to the advisability of an operation upon the soft palate, it is well to grasp the chin of the patient and hold the mouth open so as to aid his efforts at swallowing; when if the two halves of the soft palate come in contact in nearly their whole length while the superior constrictor and palatopharyngeal muscles closely approximate the palate and pharynx, the case is one in which union may almost certainly be obtained, and probably a fair result as regards phonation."

Dr. Geo. A. Raymond, of Boston, who is much in favor of appliances for cleft palate, says: "In order to have good speech there much be a roomy oral vault without obstruction. For the production of all of the open vowels and all of the consonants, save the nasal, there must be perfect closure of the post-nasal space."

We have here a demand which can rarely be supplied, either by operation or appliances.

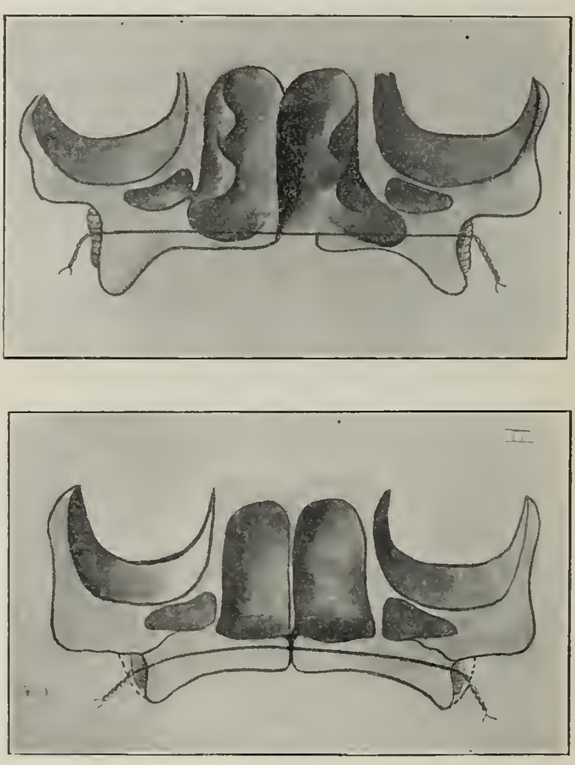
Time for Operating, When is the Most Suitable?—Congenital syphilis, and the diseases of childhood, such as whooping-cough, mumps, measles, and scarlet fever, would interfere with a successful operation. The health of the child must be good. Almost all cases can be successfully fed, either with a large nipple or with a nipple with a flange attachment, or, in the extremely bad cases, with a spoon placed far back in the mouth while the child is held in an upright position. While young children take chloroform well, as a rule, they bear the loss of blood badly. It is important then in a cleft palate operation, which is one of the most severe to which children are subjected, that the little patient be in good physical condition.

In Gross' "Surgery," published in 1859, a classic at that time and no doubt giving accurately the opinions of the best surgeons of that day, the time for operating upon harelip is given as early as the first few weeks of life; but cleft palate, while it might be done as early as the twelfth year, had better be deferred until the fifteenth year. While most writers advise closing the harelip by the third month, a few prefer to let it remain until the cleft in the palate is treated, because of the additional room given. It seems to me best to close the lip early, as it assists the infant in taking nourishment, helps to close the cleft, and comforts the mother by greatly improving the appearance of her child. When the cleft is repaired, and additional room must be had, one need not hesitate to split the lip. Most authors advise the closure of a cleft palate within the first two or three years; some earlier, even as early as the first few months. I can not here refrain from quoting from that admirable work of Jacobson: "With regard to the voice, while there is no doubt that the earlier a successful operation is performed the better will be the voice, it is possible that this has been too strongly put forward, to the exclusion of the other side of the question. Thus the possibility of an unsuccessful operation, with its inevitable loss of tissue, and scarring of what remains, has been too much kept in the background, and children under two years of age cannot have contracted a habit of speech so bad as, of itself, to call for operation before this date." This it seems to me is good reasoning. Jacobson advises that the end of the first year be reached before the soft palate is repaired, and two years before operating on a complete cleft, and then only under favorable circumstances. It is not likely that the work can be done so well that an entirely satisfactory closure can be effected at one sitting, and often it is only by repeated efforts, covering, it may be, a period of several months that the operation is complete. Failure may result because of bruising of the tissues, or because too many stitches are taken and tied too tightly. It is advisable to freshen the edges with a knife, instead of scissors, when the edges can be easily approximated, as is always desirable. Horse hair, on account of its elasticity, which prevents cutting, is an admirable suture.

Rose's position, with the head hanging over the edge of the table, and the Trendelenberg are the ones best calculated to meet the requirements.

After-treatment.—Porter, of Boston, says: "Frequent swabbing of the mouth in small children, with dioxogen, does more harm than good; large children or adults may receive benefit."

I shall not attempt to describe the various operations which every text-book on surgery contains, but I do want to call your attention to the Brophy operation, and here I show you two cuts (Figs 3 and 4) taken from his own article. The object of this operation is to close the cleft by narrowing the upper jaw. You see the wire sutures passing from side to side. These must often injure or destroy the germs of the teeth. If the cleft is wide, the palate must be contracted to an abnormal extent, so that the upper jaw will close within the lower. It must of necessity be a severe operation, and in the case in which I saw it performed it resulted most disastrously. It does not appeal to me as being good surgery.



Figs. 5 and 6.

In double hare-lip, what is to be done with the intermaxillary bone? Da Costa advises its removal, but this leaves a flat undeveloped upper lip, and it seems better if possible to retain it. Branth splits the buccal covering of the vomer, and detaches with the periosteotome the mucoperiosteum. The vomer is disarticulated, and the empty periosteal sack of the vomer will develop a new vomer. F. Blondin removes an inverted V-shaped piece of vomer, and then pushes the intermaxillary bone back into position and retains it there by means of adhesive straps and pressure. It usually takes two or three operations to complete this work, doing one side at a time.

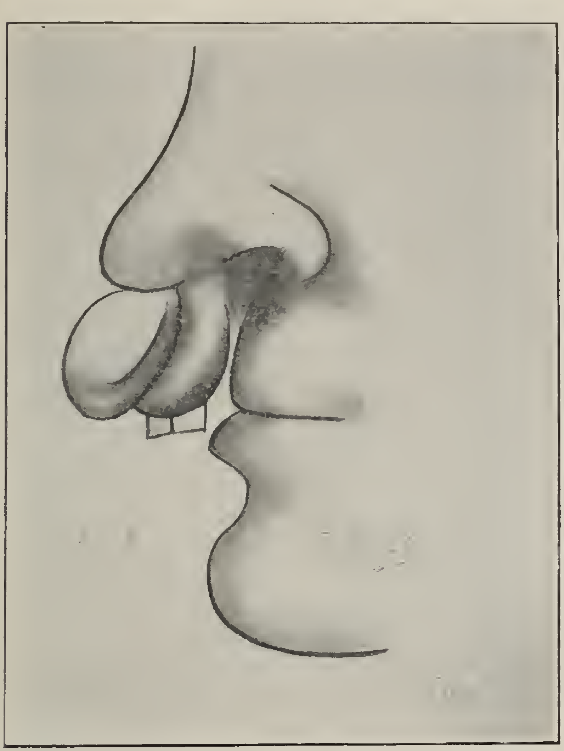


Fig. 7.

Appliances for the relief of cleft palate.—When we remember that faulty speech can rarely be remedied, even in those who have normal vocal organs, it ought not to be expected that we can entirely remedy congenital defects by either operation or mechanical means. Think of your friends or acquaintances who have learned to speak English after they have reached adult life. Can you remember one who, by accent, does not betray to you that English is not his mother tongue? If highly intelligent and educated people cannot overcome defects in their voice, when they desire so much to do so, what should we expect of defectives, especially after having learned to speak improperly? The very young cannot use the appliances, so they must learn incorrect methods. When the child has arrived at an age when an appliance can be fitted, it must of necessity be changed from time to time, corresponding to its growth. These changes are expensive, and require the services of a dentist especially skilled in this work, and such is not always easy to be found. It seems best, therefore, that cases giving reasonable hope of success, should be operated upon. A failure has not debarred us from any benefit that a mechanical appliance may afford later. In adult cases where an appliance can be comfortably worn, I think it should often be advised as decidedly preferable to an operation.

Whichever method is chosen, someone who understands the manner of correctly instructing the patient how to speak, will be of great benefit, and cannot be dispensed with without much loss.

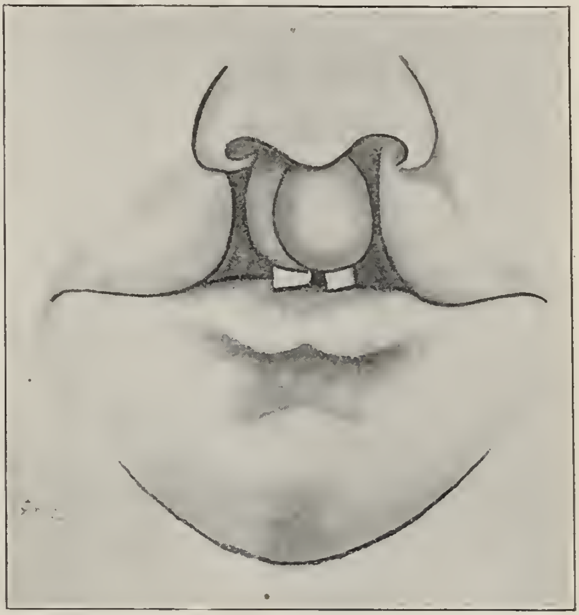


Fig. 8.

ALBUMINURIA, NEW NITRIC-ACID TEST

A glass pipette is used and the urine allowed to run up the tube one or two inches. The index finger is then placed on the top, and the urine washed and dried off the outside of the tube. It is then inserted into nitric acid, and the index finger partially removed to allow the acid to flow up the tube. The presence of albumin always causes a white ring to form at the line of contact. Globulin, albumoses, and peptones may also cause a small ring at the zone of contact, but they are seldom present. If suspected they may be tested for by boiling the urine. A cloud appears just before the boiling-point is reached, but disappears when boiling occurs. Urates may cause a similar ring. Similar experiments have been tried with twelve other reagents which have been recommended for detecting albumin in urine, but the results were never so satisfactory as when nitric acid alone was used.—L. N. Boston, New York Medical Journal.

NORTHWESTERN LANCET

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DECEMBER 15, 1902

SURGERY OF BRAIN TUMORS

An article in the Philadelphia Medical Journal for November 29, from the pen of Dr. Charles K. Mills, on "The Surgery of Brain Tumors from the Point of View of the Neurologist," is both interesting and suggestive. Dr. Mills, in the course of his active career, has studied a large number of brain-tumor cases. Many were sent to him for diagnosis in which he advised surgical procedure; many were cases in which he was called in consultation to decide upon the propriety and fix the site of operation; and there was a third set of cases in which he was present at operations on patients with whom he had no professional relations.

The article is based largely upon twenty-two cases in which operations were performed after a diagnosis of tumor or cyst had been made. Notwithstanding the large percentage of failures in such cases, Dr. Mills believes in operation in carefully chosen cases. The percentage of successes will be increased with more exact localizations, more precise craniocerebral topographical methods, and more perfect surgical technique, particularly in fibromata, encapsulated fibrosarcomata, inert gummata, and a few other neoplasms.

According to Mills the failures in operations are due to (1) mistakes in localization; (2) lack of exactness in fixing the cranial areas for operation; (3) excessive hemorrhage; (4) concussion and even contusion of the brain in osteoplastic operations with chisel and mallet; (5) prolongation of the operations; and (6) the sudden disturbance of the balance of pressure in the skull by the removal of large, hard tumors.

The importance and value of the Röntgen rays is more apparent, although the method is still unreliable. The Anderson-Makin's method of localizing the chief landmarks, the use of the Stellwagen trephine and the osteoplastic opening are earnestly advocated in place of uncertain and unsatisfactory efforts to localize the principal fissures, the old trephine and rongeur, and the mallet and chisel.

The article is particularly interesting to the surgeon, as it is an appeal and discussion based on scientific principles.

The difficulties of localization are often exasperating on account of a defective history of the patient, the absence of definite symptoms, and the tendency to delay operations until it is too late to accomplish favorable results. Unquestionably, many brain tumors are unrecognized even though the growth is situated in or near an active area. In other cases the tumor is in an inaccessible region, like the cerebellum or the midbasal portions of the brain, yet in some cases the region of the cerebellum may be invaded with safety by making surgical openings on either side, and carefully uniting them to avoid injury of the sinus. Operators are becoming more bold in their attacks on brain growths, and they appreciate more fully the delicacy of nerve substance, and necessity of dealing with it by the utmost care to avoid injuries that may seem trivial, but may be far-reaching and disastrous.

CERTIFIED MILK

At the last meeting of the Hennepin County Medical Society the president appointed a permanent Milk Commission to continue the work of the temporary committee appointed several months ago. The report of the chairman, Dr. L. A. Nippert, was accepted, and the recommendations were adopted; hence the appointment of the commission. The Ramsey County Medical Society had taken the same step, and both Commissions have suggested that the executive officer of the State Board of Health be made an honorary member of the Commissions, as both counties will act upon the suggestions of the State Board of Health, which will do, without cost, the necessary inspection connected with the work. In the East the expense of inspection is thrown upon the dairymen.

Dr. H. L. Coit, of Newark, N. J., is the physician who deserves credit for instituting this system of collecting and caring for milk under this special title. The first certified milk placed on the market was under the control of a commission apointed by the Essex County (N. J.) Medical Society. Following the formation of this commission and its method of selling certified milk, the Pediatric Society of Philadelphia formed a somewhat similar milk commission. Later a commission was formed in New York City.

The term "certified milk" is applied to milk from certain dairies being under the inspection of milk commissions appointed by various medical societies. Said milk commissions carry out a system of inspection as follows:

1. Of the dairy barns, in which cows producing such milk are housed, as to their sanitary condition.
2. Of the cows as to their general healthfulness; also the use of the tuberculin-test, and exclusion of all cows from the herd which may react to such test.
3. Of the milkers as to their general good health and freedom from infectious diseases or from association with infectious diseases in their families or households.
4. The bacteriological test of the milk.
5. The chemical analysis of the milk.
6. The method of storing, keeping, and distributing milk.

All of these are exceedingly important points. The intent of such inspection is to secure a milk that is as nearly pure as possible. Such milk naturally commands a higher price than milk collected and sold in the usual way.

The Record, of Revere, Minn., notices the failure of a so-called Minneapolis specialist. Dr. Rea, the great advertising specialist, finds that business is not good enough for him in Delano and has decided to discontinue his visits to this town, consequently Dr. O'Connor has put in an *x*-ray (ex-Rea) machine and will look into things generally.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

R. O. BEARD, M. D., SECRETARY

Stated Meeting, Wednesday evening, November 5, 1902, at the Hotel Ryan, St. Paul; the President, Dr. J. Warren Little, in the Chair.

Dr. A. Shimonek, of St. Paul, offered a specimen of intraligamentous cyst of the broad ligament, multilocular in character, partly cystic and partly solid and infected.

AN INFECTED MULTILOCULAR INTRALIGAMENTOUS CYSTO-ADENOMA

This specimen of an intraligamentous growth was removed from a delicate woman, 50 years of age, who first noticed it a few years ago. Two years ago an attempt had been made for its removal, but for some reason, unknown to me, it was abandoned and the long incision became infected and took weeks to heal.

When she presented herself to me an apparently solid tumor occupied the abdominal cavity, reaching in the median line a little above the umbilicus, curving downwards and outwards and then inwards on each side, its outlines mapping out a round and quite fixed tumor. Upon the anterior surface and midway between the symphysis pubis and the navel was another globular tumor about the size of a lemon and firmly fixed to the larger growth. The percussion note over the whole of the growth was flat and resonant outside of its outlines. The vaginal exploration revealed the absence of the portio-vaginalis. The os uteri was never found upon repeated examination with the patient in all the different positions. The tumor could be felt through this route as a smooth hard mass but not reaching far into the true pelvis.

Her suffering was not very great, being only that of commencing pressure symptoms. The bladder was somewhat irritable, and there was a mechanical constipation. The patient was in about her normal flesh; heart, lungs, liver, kidneys in a healthy condition; pulse slow, and temperature normal.

Removal necessitated an incision from a little below the xiphoid process to the symphysis and was made to the left of the old scar. A short investigation showed the nature, origin, and situation of the tumor, and with that in view the ordinary procedure of enucleation, first ligating the ovarian arteries, was attempted. This was first tried from above by trying to split the broad ligament and start the process at some good point of cleavage. The difficulty here experienced was the inability to find the proper points of union, and keeping them when they were found. The fingers would be easily lost in the meshes of the growth or the ligament when the bleeding would become quite considerable. The necessity of ligating the uterine vessels became apparent before a successful removal could be made. This, however, was not an easy matter, for the tumor was wedged in the upper part of the pelvis, and while the uterus was raised to a high position and proved to be the round mass found in close connection to the large tumor midway between the symphysis and the navel, the broad ligaments were so distorted and thickened that an attempt at ligating the vessels by transfixtion was impossible. Therefore the uterus was forcibly elevated with vulsellum forceps, and the uterus cut through at the junction of the neck with the body, first on one side and then on the other, and the spurting vessels were picked up and tied permanently.

This procedure proved to be a good one in more ways than one, for I was able now through this opening to get well between the tumor and the broad ligament and by working anteriorly and downwards, had the growth well shelled out and separated in front and to the sides. This, however, was not done without damage, as the bladder, which was torn to the extent of three fingers, was elevated high with the uterus. The opening was clamped and finally closed in three tiers, and healed promptly without a particle of leakage. The ureters were encountered on the side of the growth dilated and tortuous and elongated by their elevation, and strongly adherent to the growth, but having them under my constant view they were uninjured. A pus cavity was accidentally opened on the left and back part of the growth adherent to the sigmoid flexure, and the infection no doubt came by direct bacterial localization from that part of the intestine. The underpart of the growth gave us the greatest difficulty and anxiety, inasmuch as the adhesions were exceedingly strong and at no place could we make a clean enucleation and the fear that the large vessels might be so adherent to the mass and be at any time injured, made the work slow. However, this was accomplished successfully, when the big growth rolled out very easily. The main cavity of the tumor contained about half a gallon of partly clear and partly coagulated serum. The infected portion contained a cupful of sterile pus; the rest of the growth was made up of fibrous and adenomatous tissue.

The exact measurements of the tumor were not determined, as upon its examination the serous and pus cavities were opened, when it collapsed considerably. However, the abdomen was enlarged to about the size of a seven months' pregnancy.

The patient made an uninterrupted recovery and left the hospital in two and a half weeks.

Dr. A. W. Abbott, of Minneapolis, remarked upon the difficulty of the operation for the removal of this growth, and suggested the possibility of controlling hemorrhage in these cases by an assistant's pressure with two fingers upon the aorta.

Dr. A. M. Henderson, of Merriam Park, presented a specimen of epithelioma of the patella and neighboring bone surfaces.

EPITHELIOMA ON THE LEG

Dr. Henderson presented a specimen of epithelioma on the leg. The patient, aged 52, had an injury of the right knee at the age of twelve, which resulted in anchylosis and arrest of development. Sixteen years ago he had a compound fracture of the leg for which amputation was performed a short distance below the knee, and since that time he has worn an artificial limb. On the 15th of July of this year he wounded the skin covering the patella. The injury showed no tendency to heal, and on October 9th, when I first saw him, the region over the patella was occupied by a granulating mass of about the dimensions of one half of a small orange. Strained sections showed under the microscope nests of epithelial cells in concentric arrangement, and a marked tendency to horny degeneration. This feature is surprising, considering the very short time involved in the growth formation, a period of three months and a few days. Amputation of the thigh at its upper third was performed.

The President-elect, Dr. J. Warren Little, of Minneapolis, read his inaugural thesis upon "Hair-lip and Cleft-palate."

Dr. H. B. Sweetser, of Minneapolis, referred to the omission of any suggestion as to covering the defect in the hard palate. Some means must be adopted to this end, and the periosteum must be dissected up and used for this purpose. Much of success depends upon the extent of available tissue. He referred to the courage and caution necessary in this undertaking. He believed that the operation on hard and soft palate should be done as a whole. He preferred silver wire to horsehair or gut. Horsehair is brittle. Every fresh insertion of the needle damages tissue which cannot be spared.

Concerning hair-lip an objection against cutting intermaxillary bone lies in the sacrifice of the incisor teeth. He agreed with Dr. Little as to the inadequacy of the Brophy operation. He thought hair-lip should be repaired early. The operation for cleft-palate must be postponed to an age which will tolerate shock. It is well to operate before the full acquirement of speech, which is restored with difficulty in later years. He discussed the most favorable positions for an operation, giving preference to the head on the side, remembering that anesthesia is with difficulty maintained. The most important point of all is the asepsis, since a repetitional operation has a less prospect of success than the primary one. He described the operation of Dr. Ferguson, which he had found inapplicable. In regard to the results of operation, the vocal improvement is partial but desirable. The learning of a new language is a successful educative method.

Dr. Arnold Schwyzer, of St. Paul, discussed the technique of the operation, preferring the hanging position of the head. He suggested the suction of blood from the throat by a nasal catheter. He had used atropine prior to operation as a means of controlling the excessive secretion of mucus afterwards. He gave the detail of cases operated upon, emphasizing the desirability of the Langenbeck incision, carrying it well back to the gums. He advocated the early operation of these cases. If bad results should follow, it is still possible to use an obturator, with good effect as to speech.

Dr. C. E. Bean, of St. Paul, referred to the conditions of the voice several years after operation. His experience has been that in cleft-palate cases the vocal results were bad. He illustrated the point by reference to cases. Phonation is a very important thing, and he believed that it was better secured by the use of an obturator than by operation.

Dr. John T. Rogers, of St. Paul, suggested the good results to be attained by the use of adrenalin in these operations. He thought surgeons did not see as many of these cases nowadays as formerly because more of such operations are done by general practitioners. He deprecated this fact, since these operations demand peculiar preparation and should be essentially specialized. Such an operation is a monument to the skill or the blunders of the operator. He believed with Dr. Schwyzer that operation should be done early, since phonation can rarely be much improved after an imperfect speech has been attained. He discussed the technique of operation, advocating the use of broad flaps of tissue, and preferring silkworm sutures and shot.

Dr. J. Warren Little closed the discussion. He advocated the splitting of the bone as well as the mucous membrane on both sides and the apposition of both, allowing the bone spaces to granulate up.

He insisted that these operations should be done by the skillful alone. He could not see how any special asepsis can be employed. He condemned wire sutures because of the ridge formed in the roof of the mouth irritating the tongue. He commended for the same reason the silkworm gut and shot. He approved the use of atropine prior to operation, but had had no experience with adrenalin. He advocated the use of the chloroform spray. He referred again to his quotation from Jacobson on the question of operative age. He had been glad to hear from Dr. Bean in regard to the matter of vocal improvement.

Dr. H. A. Tomlinson read a paper, entitled "The Relational Pathology of Pneumonia."

Dr. L. A. Nippert, in discussing the paper, endorsed the view that pneumonia is no longer to be regarded as a local disease, but as a general infection with a local expression of the lungs. Two forms of the disease are to be recognized: the one similar to a general septic invasion with marked constitutional disturbance and with but slow development of the pulmonary symptoms; the other in which the lung invasion is primary and the local symptoms are prominent. Such patients may walk into a physician's office with a double pneumonia, complaining only of general weakness and dyspnea. The author's paper was of great value, although it threw no new light on the question of treatment.

Dr. Tomlinson, in closing, stated that the object of his paper had been emphasis upon the importance of the general rather than the local pathology of this disease. Success in its treatment must depend upon this appreciation and must be addressed to the maintenance of the element of general resistance.

Upon motion, the Academy adjourned.

NEWS ITEMS

NORTHWESTERN NEWS

Dr. B. J. Dvorsky, of Chicago, has located at Montgomery, Minn.

Dr. John Crowe, of West Superior, Wis., has located in Virginia, Minn.

Dr. J. P. Johnson, of Owatonna, Minn., has gone to Canon City, Colorado, to spend the winter.

Dr. Fred Rasmusson, of Hoople, N. D., has gone to Mexico to take a position as mine physician.

Dr. F. S. Bissell, of Litchfield, Minn., who has been sick for several weeks, is reported much better.

Dr. R. D. Alton, of Livingston, Montana, has gone to New York for an extended trip and expects to go to Europe.

Dr. Irving D. Wiltrout, who was formerly connected with the Sanitarium at Hudson, Wis., expects to locate at Wadena, Minn.

Dr. Fay Brigham, a recent graduate of the University of Minnesota, has entered into partnership with his father at St. Cloud, Minn.

Dr. C. C. May, of Adrian, Minn., will be absent from his practice the most of next year. Dr. Slusser will have charge of Dr. May's practice.

Dr. James Blake, who has been an interne in the Minneapolis City Hospital for the past year, is now located at Hopkins, a suburb of Minneapolis.

Dr. B. W. Kelly, of Aitken, Minn., was numbered among the deer hunters who met with accidents this season. He is just able to attend to his practice.

Dr. L. W. Armstrong, of Baltimore, Md., who has been for some time in charge of Dr. Devine's practice at Breckenridge, Minn., has decided to locate there.

The new St. Vincent Hospital at Crookston, Minn., which was opened the first of this month, is spoken of as one of the best arranged and equipped hospitals in the State.

Dr. O. K. Bertleson, of Fergus Falls, Minn., was married last month to Miss Bertha Asseln, of the same place. Dr. Bertelson has gone East to complete a post-graduate course, in New York City.

The State Conference of Charities and Corrections which met in Rochester, Minn., last month, chose Minneapolis as its meeting place next year. Dr. H. A. Tomlinson, of St. Peter, was elected president.

Dr. Frank Allport, formerly of Minneapolis, now of Chicago, has brought about in the entire state of Illinois a system of examination of the hearing and vision of school children similar to that originated by him in the schools of Minneapolis. The Illinois State Board of Health has taken the matter up.

PROGRAM OF THE SECOND ANNUAL CONFERENCE OF THE MINNESOTA STATE SANITARY ASSOCIATION

Dec. 17 and 18, 1902
St. Paul, Minn.

WEDNESDAY, DEC. 17

Morning Session—Elks' Hall.

1. Business Meeting and Committee Reports.

Afternoon Session.

Water Supplies—

1. Ideal City Supply—Mr. Geo. W. Fuller, Sanitary Engineer, New York.
2. St. Paul City Supply—Mr. L. W. Rundlett, City Engineer, St. Paul.
3. Minneapolis City Supply—Mr. F. W. Cappelen, Minneapolis.
4. Duluth City Supply—Mr. W. B. Patten, City Engineer, Duluth.
5. Rural Supplies—Mr. H. C. Carel, Univ. of Minnesota.

Evening Session, People's Church.

School Sanitation—

1. Some Problems in Preventive Medicine—Dr. Burnside Foster, St. Paul.
2. School Sanitation—Prof. G. B. Frankforter, University of Minnesota.
3. Infectious Diseases with Special Reference to Their Means of Communication—Dr. Chas. Lyman Greene, St. Paul.
4. Special Senses of Sight and Hearing—Dr. F. C. Todd, Minneapolis.
5. Deformities Among School Children—Dr. A. J. Gillette, St. Paul.

THURSDAY, DEC. 18

Morning Session.

Tuberculosis—

1. President's Address—Dr. H. M. Bracken, Minneapolis.
2. Report of Committee on Tuberculosis—Dr. H. L. Taylor, St. Paul.
3. Recent Investigations on Tuberculosis—Dr. H. F. de Schweinitz, Bureau of Animal Industry, Washington, D. C.
4. Prophylaxis—Dr. T. S. Roberts, Minneapolis.
5. Sanitarium Treatment of Tuberculosis—Dr. J. H. Eliott, Muskoka Sanitarium, Gravenhurst, Ontario, Canada.

Afternoon Session.

1. Miscellaneous Papers, Reports of Chairmen of Committees, Election of Officers, Etc.

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